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TABLES

FOR CALCULATING

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IN THE

CUTTINGS AND EMBANKMENTS

OF

CANALS, RAILWAYS, AND TURNPIKE ROADS.

BY JOHN MACNEILL, CIVIL ENGINEER,

M.R.I.A. F.R.A.S.

MEMBER OF THE INSTITUTION OF CIVIL ENGINEERS, LONDON, AND RESIDENT ENGINEER TO THE PARLIAMENTARY COMMISSIONERS OF THE HOLYHEAD AND LIVERPOOL ROADS.

UNIVERSITY

LONDON:

ROAKE AND VARTY, 31, STRAND.

1833.

ERRATA.

Page xiii. line 13, after *a b c g* insert *and*.
— xix. line 4, for *table*, read *tabular*.

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TO

THOMAS TELFORD, ESQ. F.R.S. L. & E.

THE PRESIDENT,

AND THE

OFFICERS AND MEMBERS

OF THE

INSTITUTION OF CIVIL ENGINEERS,

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PREFACE.

ALL practical engineers are well aware, by experience, of the inconveniences which arise from the length of time necessary for calculating the cubic quantity of earth-work in the cuttings and embankments of canals, railways, and turnpike roads, especially when the section is of considerable extent, and the ground very uneven. As calculations of this kind are frequently, on a short notice, required to be completed within a limited period; the consequence is, that errors are almost sure to be made, as a multiplicity of figures are necessary, though the calculations in themselves are so simple.

To save time in making these calculations, and insure accuracy in the results, were the principal objects I had in view in constructing the following Tables; how far I have succeeded, must be left to the decision of practical men, for whose use they were intended, and who are best able to judge of their utility.

An advantage may arise from the use of these Tables, which I had not at first contemplated. By the common but erroneous method of calculation, the cuttings may appear to be equal to the embankments; yet, when the work is carried into effect, a large quantity of earth may be required to make up the embankments, or there may be

too much earth in the cuttings for the embankments, according to the shape or figure of the section, as will be shown hereafter. Such a circumstance as this cannot take place if the following Tables be used to ascertain the cubic quantities; for as they are calculated from the prismoidal formula, they will give the true cubic quantity in any cutting or embankment; and consequently, if the cuttings be laid down on the section to balance the embankments, they will be found in practice to do so, when the work comes to be executed.

Contractors very frequently find that they have more earth to move than they had previously calculated upon from the section, and are, therefore, often great losers. This, in most cases, arises from erroneous calculations; for the common practice is, either to add the two extreme heights together, and to take half the sum for a mean height; or to take half the sum of the areas at each end for a mean area. Both these methods are erroneous; one makes the quantity too much—the other too little.

In calculating the Tables and correcting the press, every care that was possible has been taken to ensure accuracy—every tenth line has been calculated twice over, and the intermediate figures filled up by interpolation; so that it is hoped very few errors of any importance will be found in them.

The first series of tables from No. 1 to 22, inclusive, are calculated to bases, which very frequently occur in practice, both in canals, railways and turnpike roads; in these Tables the calculations were carried to six places of decimals, although two only are retained in the printing, as sufficient for practical purposes.

In the second series, from No. 23 to 33, the multipliers were calculated to eight places of decimals, and the additional columns to six places of decimals, although only

four places of decimals in the former and three places in the latter are retained; but the last figure in each case has been increased by one, when the following figure amounted to five, or any higher number.

The tables of the third series, from 34 to 36, are particularly adapted for turnpike roads, as they are calculated to the bases and slopes recommended by Mr. Telford, and which he has employed in the improvements on the Holyhead road.

An additional table has been added, which will be found useful in calculating the quantity of land necessary for forming canals, railways, and turnpike roads.

The Tables were nearly worked off before I was aware of Mr. Babbage's valuable investigation as to the best tint of paper, and form of type for insuring distinctness in tabular printing. Had I been aware of it I should certainly have availed myself of his important suggestions.

Although this work has not been published under the immediate direction of the Institution of Civil Engineers, yet I am happy to say it has been considered by them as a work of *practical utility*, and as such they have authorised me to dedicate it to them, as will be seen by the annexed copy of a letter from their Secretary.

London, July 1st, 1833.

Institution of Civil Engineers,
Cannon Row, Jan. 10, 1833.

DEAR SIR,

I have the pleasure to forward you a Copy of the Resolution, passed at the ordinary Meeting of the Institution of Civil Engineers on Tuesday last, expressing their approbation of your Tables on the cubic content of earthwork.

"It was moved by James Walker, Esq, seconded by B. Donkin, Esq., and carried unanimously—

That Mr. Macneill be allowed to dedicate to this Institution, the Tables which he has calculated, for ascertaining the quantity of earth-work in the cuttings and embankments of canals, railways, and turnpike roads."

I am, dear Sir,

Your's very truly,

G. C. GIBBON, SEC.

To John Macneill, Esq.

DEMONSTRATION

OF

THE PRISMOIDAL FORMULA,

BY WHICH THE TABLES WERE CALCULATED.

Let ABCGFKDE (Fig. 1. Plate I.) represent a prismoid or solid figure similar to that which is formed in excavations or embankments, in which BCDK represents the road-way, and ABCG, FKDE parallel cross sections at each end. The cubic content of this solid is equal to the areas of each end, added to 4 times the mean area, and the sum multiplied by the length of the prismoid divided by 6.

That is, to the area ABCG + area FKDE + 4 times the area *a b c g*, multiplied by $\frac{CD}{6}$:

Bisect the breadth of the road-way KD in the point O; from the point O raise the perpendicular ON, which will represent the depth of cutting at the lower end of the section; in the same manner bisect BC, in the point M, and raise the perpendicular ML, which will represent the depth of cutting at the upper end of the section; on this perpendicular lay off from the point M, a distance MQ, equal to ON, the perpendicular height of the lower end of the section; through the point Q, draw the line HI parallel to BC, this line HI will be equal to the line FE, as the planes are parallel, and

the angles of the slopes ABC, BCG are supposed to be equal to the angles FKD, KDE. If then we suppose a plane HIEF to be drawn through the lines HI and EF, it will be parallel to the base BCKD, and will divide the solid ABCGFKDE into two others, one of which will be the regular prism HBCIFKDE, and the other will be a wedge, the base of which will be the trapesium AHIG, the length IE or CD the length of the prismoid, and the edge FE, the breadth of the cutting at the lower end of the section.

This wedge may be divided by the vertical plane AHE into the two pyramids AHIGE and AHEF, the base of the first being the trapesium AHIG, and its height the line IE or CD, the length of the prism. The base of the other is the triangle FEH, and its height a perpendicular AR let fall from the vertex A to the plane HIEF.

The solid content of the prismoid will therefore be equal to the content of the regular prism HBCIFKDE, and the two pyramids AHIGE, and AHEF.

Let BC $= b$, the breadth at the bottom of the cutting.

ML $= h$, the perpendicular depth of cutting at the higher end.

ON or MQ $= h'$, the perpendicular depth of cutting at the lower end .

CD $= l$, the length of the solid.

PI $= rh'$, the ratio of the perpendicular height of the slope to its horizontal base, multiplied by the height MQ or ON.

Then the content of the prism HBCIFKDE will be equal to the area of the end FKDE, or HBCI, multiplied by CD; or to BC + PI × MQ × CD. $= \overline{b + h'r} \times h' \times l$. The content of the pyramid AHIGE is equal to the area of its base AHIG, multiplied by $\frac{1}{3}$ its height IE; or to

$[(b+rh)\,h-(b+r\,h',)\,h']\frac{l}{3}$ for the area of AHIG is equal to the difference of the areas of the ends ABCG and FKDE. And the content of the pyramid AHEF is equal to the area of the triangle HEF, $\times \frac{1}{3}$ AR, or to $\frac{1}{2}$ EF $\times$ HF $\times \frac{1}{3}$ AR $= \frac{b+2rh'}{2} \times l \times \frac{h-h'}{3}$ for AR $=$ LQ $=$ $h-h'$.

The content of the prismoid ABCGFKDE will therefore equal the sum of these three quantities; that is,

$$= (b+rh')\,h' \times l + [(b+r\,h)\,h-(b+rh')\,h']\,\frac{l}{3} + \frac{b+2rh'}{2} \times l \times \frac{h-h'}{3}$$

$$= [3\,(b+r\,h')\,h' + (b+r\,h)\,h - (b+r\,h')\,h' + \frac{b+2\,r\,h'}{2} \times h-h']\frac{l}{3}$$

$$= [2\,(b+r\,h')\,h' + (b+r\,h)\,h + \frac{b+2\,r\,h'}{2} \times h-h']\frac{l}{3}$$

$$= [4(b+r\,h')\,h' + 2\,(b+r\,h)\,h + (b+2r\,h')\,(h-h')]\frac{l}{6}$$

$$= [4\,b\,h' + 4\,r\,h'^2 + 2\,b\,h + 2\,r\,h^2 + bh + 2\,r\,h\,h' - h\,h' - 2\,r\,h'^2]\frac{l}{6}$$

$$= [3\,b\,h' + 2\,r\,h'^2 + 3\,b\,h + 2\,r\,h^2 + 2\,r\,h\,h']\frac{l}{6}$$

$$= [2\,b\,h' + b\,h' + r\,h'^2 + r\,h'^2 + 2\,b\,h + b\,h + r\,h^2 + r\,h^2 + 2\,r\,h\,h']\frac{l}{6}$$

$$= [(b+r\,h')\,h' + (b+r\,h)\,h + 2\,b\,h + 2\,b\,h' + r\,h'^2 + rh^2 + 2\,r\,h\,h']\frac{l}{6}$$

$$= \left[(b+rh')\,h' + (b+r\,h)\,h + 4\left[b + r\frac{h+h'}{2}\right]\frac{h+h'}{2}\right]\frac{l}{6}$$

$=$ area of each end, added to four times the middle area, and the sum multiplied by the length divided by 6.

DESCRIPTION OF THE TABLES.

THE first series of Tables, from 1 to 22, are calculated to such bases and slopes as usually occur in practice. By these Tables the number of cubic yards in cuttings and embankments are ascertained, by multiplying the tabular number by the length in feet between the respective heights marked on the section.

The second series of Tables, from 23 to 33, are calculated to a base of one foot, and to slopes varying from $\frac{1}{2}$ to 1—to 3 to 1. These Tables are applicable to any base, and will be of use when a work occurs which requires a base different from any given in the first series. In the practical application of this series, two multiplications are necessary instead of one.

The third series of Tables, from 34 to 36, are applicable to sections of turnpike roads, and are calculated according to the bases and slopes used by Mr. Telford on the Holyhead road. These Tables require but one multiplication in practice.

EXEMPLIFICATION OF THE USE OF THE TABLES.

Suppose *a b c d e*, (Fig. 2, Plate I.,) to represent the surface of the ground, over which a proposed railway is to be made, and the line *a e* the level of the bottom of the cutting, and let the cross section of the railway be represented by Fig. 3, Plate I. The number of cubic yards of earth in this section will be found by Table 16, which is applicable to the given cross section, that is, to a base of 30, and slopes $2\frac{1}{2}$ to 1. Thus, look for the first height (20) in the horizontal columns at the top or bottom of the page, and for the second height (50) in the vertical columns at either side of the page: at the intersection of these lines will be found the number 159.26; multiply this number by the length between the vertical lines, marked 20 and 50 on the section, Fig. 2, that is, by 400; the product, 63,704, will be the number of cubic yards in the first division of the section, marked A. Next, in column marked 50, at the top of the page and opposite 45, in the side column will be found the number 261,88; this, multiplied by 300, the length between the vertical lines, marked 50 and 45 on the section, will give 78.564, the cubic yards in the second portion of the section marked B, in Fig. 1. Proceed in the same manner for the other portions of the section marked C, D, E, F, and arrange the work as in the annexed example.

Should the longitudinal sections be laid down by a scale of links instead of feet, the result given by the Tables should be multiplied by the decimal ·66 in order to get the true content.

Example 1.

By the Tables.

Table No.	159.26	261.88	110.03
length	400	300	530
	A = 63704.00	B = 78564.00	330090
			55015
			C = 58315.90

T. No. =	62.35	153.09	71.60
	450	210	1000
	311750	153090	F = 71600.00
	24940	30618	
	D = 28057.50	E = 32148.90	

These products collected will be as follows:—

A =	63704.00
B =	78564.00
C =	58315.90
D =	28057.50
E =	32148.90
F =	71600.00
The sum of which is	332390.30 = the true quantity, in cubic yards.

This example worked by the Tables requires 172 figures; to work out the same result *without the Tables will require* 802 figures.

Example 2.

The same section, calculated by the Prismoidal formula, without using the Tables will be as follows:—

height	20	height	50		50
slope	2.5	slope	2.5		20
	100		250	2)	70
	40		100		
	50.0		125.0	mean height	35
base	30	base	30	slope	2.5
	80.0		155		175
height	20	height	50		70
					87.5
area =	1600.0	area =	7750	base	30
					117.5
				mean height	35
					5875
					3525
				mean area	4112.5
					4
				4 times middle area =	16450.0
				area of greater end	7750.0
				area of lesser end	1600.0
				6)	25800
				3)	4300
				9)	1433.33
				A =	159.26 × 400 = 63704.0

Example 2 continued.

height 50. area of greater end = 7750

```
 45    height                    45
2.5    slope                     50
----                             --
 225                          2 ) 95
 90                              --
-----                            47.5   mean height
112.5                             2.5   slope
 30    base                      ----
-----                            2375
142.5                            950
  4.5  height                    -----
-----                           118.75
 7125                            30     base
5700                            -----
-----                           148.75
6412.5 = area of lesser end       47.5  mean height
-------                         -----
                                 74375
                                104125
                                59500
                                -------
                                7065.625
                                       4
                               ---------
                               28262.500 = 4 times middle area
                                6412.5
                                7750
                                -------
                             6 ) 42425.0
                                -------
                             3 ) 7070.83
                                -------
                             9 ) 2356.94
                                -------
                          B = 261.88×300=78564
                                -------
```

Example 2 continued.

hight 45 area = 6412.5

	10	height	
	2.5	slope	
	25.0		
	30	base	
	55		
	10	height	
area of lesser end	550		
4 times middle area	10862.5		
area of lesser end	550.0		
area of greater end	6412.5		
	6) 17825.0		
	3) 2970.83		
	9) 990.27		
	110.03		
	530	length	
	330090		
	55015		
C =	58315.90		

	45	
	10	
2)	55	
	27.5	mean height
	2.5	slope
	1375	
	550	
	68.75	
	30	base
	98.75	
	27.5	mean height
	49375	
	69125	
	19750	
	2715.625	
	4	
	10862.500	= 4 times middle area.

Example 2 continued.

height 10 area = 550

height	30		30	
	2.5		10	
	150		2) 40	
	60			
			20	mean height
	75.0		2.5	slope
	30	base		
			100	
	105		40	
	30	height		
			50.0	
area of greater end	3150		30	base
area of lesser end	550			
4 times middle area	6400		80	
			20	mean height
	6) 10100			
			1600	
	3) 1683.33		4	
	9) 561.11		6400	= 4 times middle area
	62.35			
	450	length		
	311750			
	24940			
D =	28057.50			

Example 2 continued.

height 30 area = 3150

	40 height		40
	2.5		30
	200		2) 70
	80		35 mean height
	100.0		2.5 slope
	30 base		175
	130		70
	40 height		87.5
area of greater end	5200		30 base
area of lesser end	3150		117.5
4 times middle area	16450		35 mean height
	6) 24800		5875
	3) 4133.33		3525
	9) 1377.77		4112.5 area
	153.09		4
	210 = length		16450.0 = 4 times middle area.
	153090		
	30618		
E =	32148.90		

Example 2 continued.

height 40 area as before, 5200

40	height
0	height
2) 40	
20	mean height
2.5	
100	
40	
50.0	
30	base
80	
20	mean height
1600	
4	
6400	= 4 times middle area
5200	
6) 11600	
3) 1933.33	
9) 644.44	
71.60	
1000	= length
F = 71600.00	

A	=	63704.00
B	=	78564.00
C	=	58315.90
D	=	28057.50
E	=	32148.90
F	=	71600.00
Cubic yards	=	332,390.30 true content.

This example, worked at length by the prismoidal formula, requires 802 figures, by using the Tables, as already shown in page 18, the same result is obtained by 172 figures.

Example 3.

By the common, but erroneous method of mean heights, the work will be as follows:—

20	height	50	height
50	height	45	height
2) 70		2) 95	
35	mean height	47.5	mean height
2.5	slope	2.5	slope
175		2375	
70		950	
87.5		118.75	
30	base	30	base
117.5		148.75	
35	mean height	47.5	mean height
5875		74375	
3525		104215	
		59500	
3) 4112.5		3) 7065.625	
9) 1370.83		9) 2355.21	
152.31		261.69	
400	length	300	length
A = 60,924.00		B = 78,507.00	

Example 3 *continued.*

```
   45  height
   10  height
   --
2 ) 55
   --
   27.5  mean height
    2.5  slope
   ----
   1375
   550
   ----
   68.75
   30     base
   ----
   98.75
   27.5 mean height
   -----
   49375
  69125
  19750
  -----
3 ) 2715.625
  -------
9 )  905.208
  -------
  100.579
      530 length
  -------
   301737
  50290
  -------
C = 53,307.37
  -------
```

```
   10  height
   30  height
   --
2 ) 40
   --
   20  mean height
  2.5  slope
  ----
  100
  40
  ---
  50.0
  30    base
  ----
  80.0
  20.0  mean height
  ----
3 ) 1600
  ------
9 )  533.33
  -------
    59.26
      450  length
  -------
  296300
  23704
  -------
D = 26667.00
  -------
```

Example 3 *continued.*

```
    30  height
    40  height
    --
2 ) 70
    --
    35  mean height
    2.5 slope
    ---
    175
    70
    ---
    87.5
    30  base
    ---
    117.5
      35 mean height
    ---
    5875
   3525
  ------
3 ) 4112.5
  -------
9 ) 1370.83
  -------
   152.32
     210  length
   ------
   152520
   30464
  -------
F = 31987.20
  -------
```

```
    40  height
     0  height
    --
2 ) 40
    --
    20  mean height
    2.5
    ---
    100
    40
    ---
    50.0
    30  base
    ---
    80.0
    20  mean height
    ---
3 ) 1600
    ----
9 ) 533.33
    ------
    59.26
    1000  length
    ------
F = 59260.00
    --------
```

Example 3 *continued.*

A = 60,924.00
B = 78,507.00
C = 53,307.37
D = 26,667.00
E = 31,987.20
F = 59,260.00

310,652.57 cube yards by common method.
332,390.30 cube yards, true content.

21,737.73 error, by this method of calculation.

The number of figures required by this process is 469.

Example 4.

By the erroneous method of mean areas.

20 height	50 height
2.5 slope	2.5
100	250
40	100
50.0	125.0
30 base	30.0 base
80.0	155.0
20 height	50.0 height
1600 area	7750.0 area
	1600.0
	2) 9350
	4675 mean area
	400 length
	3) 1870000
	9) 623333
	A = 69,259.26

Example 4 continued.

	height 50	area as before	7750.0
			6412.5
height	45		
slopes	2.5	2)	14162.5
	225	mean area	7081.25
	90	length	300
	112.5	3)	2124375.00
base	30		
	142.5	9)	708125.00
height	45	B =	78,680.55
	7125		
	5700		
area	6412.5		

	height 45	area as above	6412.5
			550.0
height	10		
slopes	2.5	2)	6962.5
	25.0	mean area	3481.25
base	30	length	530
	55		10443750
height	10		1740625
area =	550	3)	1845062.50
		9)	615020.83
		C =	68,335.65

Example 4 continued.

	height 10	area as before 550
		3150
height 30		
slopes 2.5		2) 3700
150		mean area 1850
60		length 450
75.0		92500
base 30		7400
105		3) 832500
height 30		
area = 3150		9) 277500
		D = 30,833.33

	height 30	area as above 3150
		5200
height 40		
slopes 2.5		2) 8350
200		mean area 4175
80		length 210
100.0		41750
base 30		8350
130		3) 876750
height 40		
area = 5200		9) 292250
		E = 32,472.22

Example 4 continued.

height 40 area as before 2) 5200

height 0 mean area 2600

1000 length

3) 2600000

9) 866666.6

F = 96,296.29

A = 69,259.26
B = 78,680.55
C = 68,335.65
D = 30,833.33
E = 32,472.22
F = 96,296.29

375,877.30 cube yards by the incorrect method of mean areas.
332,390.30 by the true method.

43,487.00 error in excess, by this method of calculation.

The number of figures required by this process is 501.

EXEMPLIFICATION OF THE USE OF THE SECOND SERIES OF TABLES.

Example 5.

Let *a b c d e*, (Fig. 4, Plate I.,) represent the ground line, or longitudinal section of part of a canal, and *a b c d e f g h*, (Fig. 5,) a cross section of the same canal. As that part of the canal below the level of the towing path is uniform, it may be calculated at one operation, as follows. Examine the first series of Tables to see if there be one corresponding to the given base and slopes; if there is, proceed as in the first example; if not, turn to the second series, and find the Table corresponding to the given slopes, which in this case is Table 25; look along the upper line of the page for the given depth below the level of the towing path, which in this example is six feet; next look along either of the side vertical columns for the same depth, six feet; at the intersection of these lines there will be found in the column of multipliers the number . 2222, and in the column of additions the number 1.333. Set these numbers down and multiply the given base by the multiplier, and to the product add the number taken from the addition column, the sum will be the mean area, which is to be multiplied by the length of the section, for the content in cube yards.

Thus,

The multiplier =	2222
base =	16
	13332
	2222
	3.5552
add =	1.333
	4.888
Total length of section from a to e =	2500
	24440.00
	9776
Cube yards =	12,220.000

As the width at the bottom of the canal is sixteen feet, the slopes 1 to 1, and the depth from the level of the towing path to the bottom of the canal six feet; the width from bank to bank at the level of the towing path, or from c to f, will be twenty-eight feet, and the whole width of cutting at the same level from b to g will be forty-two feet.

As there is no Table in the first series calculated to this base, it will be necessary to have recourse to Table 27 of the second series, which is calculated to the given slopes of $1\frac{1}{2}$ to 1, and base 1.

In taking out the tabular numbers from this Table, it must be observed that the depths of cuttings marked on the vertical lines a b c d e of Fig. 4, are supposed to be to the surface of the water, which is one foot below the level of the towing path; it will therefore be necessary to subtract one foot from each of these heights in looking for the tabular numbers.

The calculation will therefore be as follows,

Heights.	Tabular Num.	
	Mult.	Add.
A = 3 — 24	0.5000	12.167
B = 24 — 44	1.2593	66.074
C = 44 — 14	1.0741	50.889
D = 14 — 11	0.4630	8.722

Mult.	Base.	Add.	Length.	Cube yard.
.5000	× 42 + 12.167	× 100	=	331.67
1.2593	× 42 + 66.074	× 1000	=	118,964.60
1.0741	× 42 + 50.889	× 800	=	76,800.96
0.4630	× 42 + 8.722	× 600	=	16,900.80

Cubic content above the level of the towing path	212,998.03
Cubic content below the level of the towing path as before found	12,220.00
Total content of section =	225,218.03

EXEMPLIFICATION OF THE USE OF THE THIRD SERIES OF TABLES.

Example 6.

Let *a b c d e f g*, (Fig. 6, Plate II.,) represent a section of the ground over which a turnpike road is to be made, and *k l m n*, Fig. 7, the cross section of the road. Table 36 in the third series is calculated to the required base 31, and slopes 2 to 1 on one side, and 3 to 1 on the opposite side: the calculation will therefore be as follows:—

	Heights.			Tab. No.		Lengths.		Content in cube yards.
A	= 25	− 20	−	72.90	×	200	=	14580
B	= 20	− 10	−	38.83	×	400	=	15532
C	= 10	− 12	−	23.86	×	100	=	2386
D	= 12	− 18	−	38.33	×	1000	=	38330
E	= 18	− 20	−	55.27	×	800	=	44216
F	= 20	− 0	−	38.83	×	900	=	34947
								149991
				Total content of section				

Example 7.

Let it be required to ascertain the quantity of cutting and embanking in the section represented by Fig. 8, Plate II.

By the common method of mean heights the cuttings will be found to amount to

121,554 cube yards

The embankments to 121,756 cube yards

Difference only = 202

By Table 6 the quantity of cubic cutting is found to be,

Heights.			Tab. No.			
0	—	25	— 25.46	× 300	=	7,638
25	—	30	— 72.69	× 900	=	65,421
30	—	0	— 33.33	× 400	=	13,332
				Cutting	=	86,391

By Table 12 the true quantity of embankment will be found as follows:

Heights.			Tab. No.		Length.		Cube yds.
0	—	15	— 15.56	×	800	=	12,448
15	—	0	— 15.56	×	400	=	6,224
0	—	35	— 53.58	×	400	=	21,432
35	—	40	— 154.32	×	300	=	46,296
40	—	0	— 66.17	×	700	=	46,319
					Embanking	=	132,719

Embanking	132,719	
Cutting	86,391	
Deficiency of earth to make the embankments . . .	46,328	cubic yards.

This example alone will be sufficient to show how important it is to contractors to calculate cuttings and embankments by the true formula, for in such cases as this, a contractor who calculated by the common method of mean heights would imagine he had only two hundred and two cube yards of earth to carry from back cutting, whereas in reality he would be required to find 46,328 cube yards over and above what the cutting would produce, and what he had calculated upon, and this quantity at the low price of fourpence per cube yard would amount to 772*l.* 2*s.* 8*d.*

EXEMPLIFICATION OF THE TABLE

For ascertaining the quantity of land necessary for the formation of a canal, railway, or turnpike road.

Rule.—Add any two adjacent heights or depths of cuttings together, multiply the sum by the ratio of the slopes, in the cuttings or embankments; add to this product the width of the cutting at bottom, or embankment at top, and look for the sum in the side columns in the Table; take out the corresponding tabular number, which number multiplied by the length in feet between the heights, will give the acres and decimal parts of an acre that will be required for the given cutting.

Thus, let it be required to determine the superficial quantity of land required for the railway, a section of which is given in Plate I., Fig. 2.

The calculation will be as follows:—

	Heights.	
	20 + 50 =	70
Multiply by ratio of slopes		2.5
		350
		140
		175.0
add the base		30
Tabular number corresponding to	205 =	.0047061
Multiplied by length		400
Acres and decimals		1.8824400

or 1 acre 3 roods 21 perches.

FIRST SERIES

OF

TABLES.

Slopes from 1 *to* 1 *to* 3 *to* 1.

BASES 20 to 50.

TABLE I.—BASE 30—SLOPES 1 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	29.09	30.42	31.78	33.16	34.57	36.00	37.46	38.94	40.44	41.98	0
1	30.04	31.38	32.75	34.15	35.57	37.01	38.48	39.98	41.49	43.04	1
2	31.01	32.37	33.75	35.16	36.59	38.05	39.53	41.04	42.57	44.12	2
3	32.01	33.38	34.78	36.20	37.64	39.11	40.60	42.12	43.67	45.23	3
4	33.04	34.42	35.83	37.26	38.72	40.20	41.70	43.23	44.79	46.37	4
5	34.09	35.48	36.90	38.35	39.81	41.31	42.83	44.37	45.94	47.53	5
6	35.16	36.57	38.00	39.46	40.94	42.44	43.98	45.53	47.11	48.72	6
7	36.26	37.68	39.12	40.59	42.09	43.60	45.15	46.72	48.31	49.93	7
8	37.38	38.81	40.27	41.75	43.26	44.79	46.35	47.93	49.53	51.16	8
9	38.53	39.98	41.44	42.94	44.46	46.00	47.57	49.16	50.78	52.42	9
10	39.70	41.16	42.64	44.15	45.68	47.23	48.81	50.42	52.05	53.70	10
11	40.90	42.37	43.86	45.38	46.93	48.49	50.09	51.70	53.35	55.01	11
12	42.12	43.60	45.11	46.64	48.20	49.78	51.38	53.01	54.67	56.35	12
13	43.37	44.86	46.38	47.93	49.49	51.09	52.70	54.35	56.01	57.70	13
14	44.64	46.15	47.68	49.23	50.81	52.42	54.05	55.70	57.38	59.09	14
15	45.93	47.46	49.00	50.57	52.16	53.78	55.42	57.09	58.78	60.49	15
16	47.26	48.79	50.35	51.93	53.53	55.16	56.81	58.49	60.20	61.93	16
17	48.60	50.15	51.72	53.31	54.93	56.57	58.23	59.93	61.64	63.38	17
18	49.98	51.53	53.11	54.72	56.35	58.00	59.68	61.38	63.11	64.86	18
19	51.37	52.94	54.53	56.15	57.79	59.46	61.15	62.86	64.60	66.37	19
20	52.79	54.37	55.98	57.60	59.26	60.94	62.64	64.37	66.12	67.90	20
21	54.23	55.83	57.44	59.09	60.75	62.44	64.16	65.90	67.67	69.46	21
22	55.70	57.31	58.94	60.59	62.27	63.98	65.70	67.46	69.23	71.04	22
23	57.20	58.81	60.46	62.12	63.81	65.53	67.27	69.04	70.83	72.64	23
24	58.72	60.35	62.00	63.68	65.38	67.11	68.86	70.64	72.44	74.27	24
25	60.26	61.90	63.57	65.26	66.98	68.72	70.48	72.27	74.09	75.93	25
26	61.83	63.48	65.16	66.86	68.59	70.35	72.12	73.93	75.75	77.60	26
27	63.42	65.09	66.78	68.49	70.23	72.00	73.79	75.60	77.44	79.31	27
28	65.04	66.72	68.42	70.15	71.90	73.68	75.48	77.31	79.16	81.04	28
29	66.68	68.37	70.09	71.83	73.59	75.38	77.20	79.04	80.90	82.79	29
30	68.35	70.05	71.78	73.53	75.31	77.11	78.94	80.79	82.67	84.57	30
31	70.04	71.75	73.49	75.26	77.05	78.86	80.70	82.57	84.46	86.37	31
32	71.75	73.48	75.23	77.01	78.81	80.64	82.49	84.37	86.27	88.20	32
33	73.49	75.23	77.00	78.79	80.60	82.44	84.31	86.20	88.11	90.05	33
34	75.26	77.01	78.79	80.59	82.42	84.27	86.15	88.05	89.98	91.93	34
35	77.05	78.81	80.60	82.42	84.26	86.12	88.01	89.93	91.86	93.83	35
36	78.86	80.64	82.44	84.27	86.12	88.00	89.90	91.83	93.78	95.75	36
37	80.70	82.49	84.31	86.15	88.01	89.90	91.81	93.75	95.72	97.70	37
38	82.57	84.37	86.20	88.05	89.93	91.83	93.75	95.70	97.68	99.68	38
39	84.46	86.27	88.11	89.98	91.86	93.78	95.72	97.68	99.67	101.68	39
40	86.37	88.20	90.05	91.93	93.83	95.75	97.70	99.68	101.68	103.70	40
41	88.31	90.15	92.01	93.90	95.81	97.75	99.72	101.70	103.72	105.75	41
42	90.27	92.12	94.00	95.90	97.83	99.78	101.75	103.75	105.78	107.83	42
43	92.26	94.12	96.01	97.93	99.86	101.83	103.81	105.83	107.86	109.93	43
44	94.27	96.15	98.05	99.98	101.93	103.90	105.90	107.93	109.98	112.05	44
45	96.31	98.20	100.11	102.05	104.01	106.00	108.01	110.05	112.11	114.20	45
46	98.37	100.27	102.20	104.15	106.12	108.12	110.15	112.20	114.27	116.37	46
47	100.46	102.37	104.31	106.27	108.26	110.27	112.31	114.37	116.46	118.57	47
48	102.57	104.49	106.44	108.42	110.42	112.44	114.49	116.57	118.67	120.79	48
49	104.70	106.64	108.60	110.59	112.60	114.64	116.70	118.79	120.90	123.04	49
50	106.86	108.81	110.79	112.79	114.81	116.86	118.94	121.04	123.16	125.31	50
	31	32	33	34	35	36	37	38	39	40	

TABLE I.—BASE 30—SLOPES 1 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	43.53	45.11	46.72	48.35	50.00	51.68	53.38	55.11	56.86	58.64	0
1	44.60	46.20	47.81	49.46	51.12	52.81	54.53	56.27	58.04	59.83	1
2	45.70	47.31	48.94	50.59	52.27	53.98	55.70	57.46	59.23	61.04	2
3	46.83	48.44	50.09	51.75	53.44	55.16	56.90	58.67	60.46	62.27	3
4	47.98	49.60	51.26	52.94	54.64	56.37	58.12	59.90	61.70	63.53	4
5	49.15	50.79	52.46	54.15	55.86	57.60	59.37	61.16	62.98	64.81	5
6	50.35	52.00	53.63	55.38	57.11	58.86	60.64	62.44	64.27	66.12	6
7	51.57	53.23	54.93	56.64	58.38	60.15	61.94	63.75	65.59	67.46	7
8	52.81	54.49	56.20	57.93	59.68	61.46	63.26	65.09	66.94	68.81	8
9	54.09	55.78	57.49	59.23	61.00	62.79	64.60	66.44	68.31	70.20	9
10	55.38	57.09	58.81	60.57	62.35	64.15	65.98	67.83	69.70	71.60	10
11	56.70	58.42	60.16	61.93	63.72	65.53	67.37	69.23	71.12	73.04	11
12	58.05	59.78	61.53	63.31	65.11	66.94	68.79	70.67	72.57	74.49	12
13	59.42	61.16	62.93	64.72	66.53	68.37	70.23	72.12	74.04	75.98	13
14	60.81	62.57	64.35	66.15	67.98	69.83	71.70	73.60	75.53	77.48	14
15	62.23	64.00	65.79	67.60	69.44	71.31	73.20	75.11	77.05	79.01	15
16	63.68	65.46	67.26	69.09	70.94	72.81	74.72	76.64	78.59	80.57	16
17	65.15	66.94	68.75	70.59	72.46	74.35	76.26	78.20	80.16	82.15	17
18	66.64	68.44	70.27	72.12	74.00	75.90	77.83	79.78	81.75	83.75	18
19	68.16	69.98	71.81	73.68	75.57	77.48	79.42	81.38	83.37	85.38	19
20	69.70	71.53	73.38	75.26	77.16	79.09	81.04	83.01	85.01	87.04	20
21	71.27	73.11	74.98	76.86	78.78	80.72	82.68	84.67	86.68	88.72	21
22	72.86	74.72	76.59	78.49	80.42	82.37	84.35	86.35	88.37	90.42	22
23	74.48	76.35	78.23	80.15	82.09	84.05	86.04	88.05	90.09	92.15	23
24	76.12	78.00	79.90	81.83	83.78	85.75	87.75	89.78	91.83	93.90	24
25	77.79	79.68	81.59	83.53	85.49	87.48	89.49	91.53	93.59	95.68	25
26	79.48	81.38	83.31	85.26	87.23	89.23	91.26	93.31	95.38	97.48	26
27	81.20	83.11	85.05	87.01	89.00	91.01	93.05	95.11	97.20	99.31	27
28	82.94	84.86	86.81	88.79	90.79	92.81	94.86	96.94	99.04	101.16	28
29	84.70	86.64	88.60	90.59	92.60	94.64	96.70	98.79	100.90	103.04	29
30	86.49	88.44	90.42	92.42	94.44	96.49	98.57	100.67	102.79	104.94	30
31	88.31	90.27	92.26	94.27	96.31	98.37	100.46	102.57	104.70	106.86	31
32	90.15	92.12	94.12	96.15	98.20	100.27	102.37	104.49	106.64	108.81	32
33	92.01	94.00	96.01	98.05	100.11	102.20	104.31	106.44	108.60	110.79	33
34	93.90	95.90	97.93	99.98	102.05	104.15	106.27	108.42	110.59	112.79	34
35	95.81	97.83	99.86	101.93	104.01	106.12	108.26	110.42	112.60	114.81	35
36	97.75	99.78	101.83	103.90	106.00	108.12	110.27	112.44	114.64	116.86	36
37	99.72	101.75	103.81	105.90	108.01	110.15	112.31	114.49	116.70	118.94	37
38	101.70	103.75	105.83	107.93	110.05	112.20	114.37	116.57	118.79	121.04	38
39	103.72	105.78	107.86	109.98	112.11	114.27	116.46	118.67	120.90	123.16	39
40	105.75	107.83	109.93	112.05	114.20	116.37	118.57	120.79	123.04	125.31	40
41	107.41	109.90	112.01	114.15	116.31	118.49	120.70	122.94	125.20	127.48	41
42	109.90	112.00	114.12	116.27	118.44	120.64	122.86	125.11	127.38	129.68	42
43	112.01	114.12	116.26	118.42	120.60	122.81	125.05	127.31	129.59	131.90	43
44	114.15	116.27	118.42	120.59	122.79	125.01	127.26	129.53	131.83	134.15	44
45	116.31	118.44	120.60	122.79	125.00	127.23	129.49	131.78	134.09	136.42	45
46	118.49	120.64	122.81	125.01	127.23	129.48	131.75	134.05	136.37	138.72	46
47	120.70	122.86	125.05	127.26	129.49	131.75	134.04	136.35	138.68	141.04	47
48	122.94	125.11	127.31	129.53	131.78	134.05	136.35	138.67	141.01	143.38	48
49	125.20	127.38	129.59	131.83	134.10	136.37	138.68	141.01	143.37	145.75	49
50	127.48	129.68	131.90	134.15	136.42	138.72	141.04	143.38	145.75	148.15	50
	41	42	43	44	45	46	47	48	49	50	

TABLE II.—BASE 30—SLOPES 1¼ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	17.29	19.69	20.94	22.22	23.53	24.88	26.25	27.65	29.02	30 56	0
1	19.37	20.60	21.87	23.16	24.49	25.85	27.24	28.66	30.11	31.59	1
2	20.29	21.54	22.82	24.15	25.48	26.85	28.26	29.69	31.16	32.65	2
3	21.25	22.52	23.81	25.15	26.50	27.89	29.32	30.76	32.24	33.75	3
4	22.24	23.52	24.83	26.17	27.55	28.95	30.39	31.85	33.35	34.88	4
5	23.26	24.55	25.88	27.24	28.63	30.05	31.50	32.98	34.49	36.03	5
6	24.31	25.62	26.96	28.33	29.74	31.17	32.64	34.14	35.66	37.22	6
7	25.39	26.71	28.07	29.46	30.88	32.33	33.81	35.32	36.87	38.44	7
8	26.50	27.84	29.21	30.62	32 05	33.52	35.02	36.54	38.10	39.69	8
9	27.64	29.00	30.39	31.81	33.26	34.74	36.25	37.79	39.37	40.97	9
10	28.81	30.19	31.59	33.02	34.49	35.99	37.52	39.07	40.66	42.28	10
11	30.02	31.40	32.82	34.27	35.76	37.27	38.81	40.39	41.99	43.63	11
12	31.25	32.65	34.09	35.56	37.05	38.58	40.14	41.73	43.35	45.00	12
13	32.52	33.94	35.39	36.87	38.38	39.92	41.50	43.10	44.74	46.40	13
14	33.81	35.25	36.71	38.21	39.74	41.30	42.89	44.51	46.16	47.84	14
15	35.14	36.59	38.07	39.58	41.13	42.70	44.31	45.94	47.51	49.31	15
16	36.50	37.96	39.46	40.99	42.55	44.14	45.76	47.41	49.09	50.80	16
17	37.89	39.37	40.88	42.42	44.00	45.60	47.24	48.90	50.60	52.33	17
18	39.31	40.80	42.33	43.89	45.48	47.10	48.75	50.43	52.15	53.89	18
19	40.76	42.27	43.81	45.39	46.99	48.63	50.29	51.99	53.72	55.48	19
20	42.24	43.77	45.32	46.91	48.53	50.19	51.87	53.58	55.32	57.10	20
21	43.75	45.29	46.87	48.47	50.11	51.77	53.47	55.20	56.96	58.75	21
22	45.29	46.85	48.44	50.06	51.71	53.40	55.11	56.85	58.63	60.43	22
23	46.87	48.44	50.05	51.68	53.35	55.05	56.74	58.53	60.32	62.15	23
24	48.47	50.06	51.68	53.33	55.02	56.73	58.47	60.25	62.05	63.89	24
25	50.11	51.71	53.35	55.02	56.71	58.44	60.20	61.99	63.81	65.66	25
26	51.77	53.40	55.05	56.73	58.44	60.19	61.96	63.77	65.60	67.47	26
27	53.47	55.11	56.74	58.47	60.20	61.96	63.75	65.57	67.42	69.31	27
28	55.20	56.85	58.53	60.25	61.99	63.77	65.57	67.41	69.27	71.17	28
29	56.96	58.63	60.32	62.05	63.81	65.60	67.42	69.27	71.16	73.07	29
30	58.75	60.43	62.15	63.89	65.66	67.47	69.31	71.17	73.07	75.00	30
31	60.57	62.27	64.00	65.76	67.55	69.37	71.22	73.10	75.02	76.96	31
32	62.42	64.14	65.88	67.65	69.46	71.30	73.16	75.06	76.99	78.95	32
33	64.31	66.03	67.79	69.58	71.40	73.26	75.14	77.05	79.00	80.97	33
34	66.22	67.96	69.74	71.54	73.38	75.26	77.15	79.07	81.03	83.02	34
35	68.16	69.92	71.71	73.53	75.39	77.27	79.18	81.13	83.10	85.11	35
36	70.14	71.91	73.72	75.56	77.42	79.32	81.25	83.21	85.20	87.22	36
37	72.15	73.94	75.76	77.61	79.49	81.40	83.35	85.32	87.33	89.37	37
38	74.18	75.99	77.82	79.69	81.59	83.52	85.48	87.47	89.49	91.54	38
39	76.25	78.07	79.92	81.81	83.72	85.66	87.64	89.65	91.68	93.75	39
40	78.35	80.19	82.05	83.95	85.88	87.84	89.83	91.85	93.90	99.99	40
41	80.48	82.33	84.21	86.13	88.07	90.05	92.05	94.09	96.16	98.25	41
42	82.64	84.51	86.40	88.33	90.29	92.28	94.31	96.36	98.44	100.56	42
43	84.83	86.71	88.63	90.57	92.55	94.55	96.59	98.66	100.76	102.89	43
44	87.05	88.95	90.88	92.84	94.83	96.85	98.90	100.99	103.10	105.25	44
45	89.31	91.22	93.16	95.14	97.15	99.18	101.25	103.35	105.48	107.64	45
46	91.59	93.52	95.48	97.47	99.49	101.54	103.63	105.74	107.89	110.06	46
47	93.90	95.85	97.32	99.83	101.87	103.94	106.03	108.16	110.32	112.52	47
48	96.25	98.21	100.20	102.22	104.27	106.36	108.47	110.62	112.79	115.00	48
49	98.63	100.60	102.61	104.64	106.71	108.81	110.94	113.10	115.29	117.52	49
50	101.13	103.02	105.05	107.10	109.18	111.30	113.40	115.62	117.82	120.06	50
	21	22	23	24	25	26	27	28	29	30	

TABLE II.—BASE 30—SLOPES 1½ to 1.

Feet	31	32	33	34	35	36	37	38	39	40	Feet.
0	32.05	33.58	35.15	36.74	38.37	40.02	41.70	43.40	45.14	46.91	0
1	33.02	34.64	36.21	37.81	39.44	41.10	42.80	44.52	46.27	48.10	1
2	34.18	35.74	37.33	38.95	40.60	42.29	44.00	45.74	47.51	49.30	2
3	35.29	36.87	38.47	40.11	41.78	43.48	45.21	46.98	48.77	50.57	3
4	36.43	38.02	39.65	41.30	42.98	44.69	46.44	48.21	50.02	51.85	4
5	37.61	39.21	40.85	42.52	44.21	45.94	47.70	49.49	51.31	53.16	5
6	38.81	40.43	42.08	43.77	45.48	47.22	49.00	50.80	52.64	54.51	6
7	40.05	41.68	43.35	45.05	46.77	48.53	50.32	52.15	54.00	55.88	7
8	41.31	42.96	44.65	46.36	48.10	49.88	51.68	53.52	55.39	57.28	8
9	42.61	44.27	45.97	47.70	49.46	51.25	53.07	54.92	56.81	58.72	9
10	43.94	45.62	47.33	49.07	50.85	52.65	54.49	56.36	58.26	60.19	10
11	45.29	46.99	48.72	50.48	52.27	54.09	55.94	57.82	59.74	61.68	11
12	46.68	48.40	50.14	51.91	53.72	55.56	57.42	59.32	61.25	63.21	12
13	48.10	49.83	51.59	53.38	55.20	57.05	58.94	60.85	62.79	64.77	13
14	49.55	51.30	53.07	54.88	56.71	58.58	60.48	62.41	64.37	66.36	14
15	51.03	52.79	54.58	56.40	58.26	60.14	62.05	64.00	65.97	67.98	15
16	52.55	54.32	56.13	57.96	59.83	61.73	63.66	65.62	67.61	69.63	16
17	54.09	55.88	57.70	59.55	61.44	63.35	65.29	67.27	69.27	71.31	17
18	55.66	57.47	59.31	61.17	63.07	65.00	66.96	68.95	70.97	73.02	18
19	57.27	59.09	60.94	62.82	64.74	66.68	68.66	70.66	72.70	74.77	19
20	58.90	60.74	62.61	64.51	66.44	68.39	70.39	72.41	74.46	76.54	20
21	60.57	62.42	64.31	66.22	68.16	70.14	72.15	74.18	76.25	78.35	21
22	62.27	64.14	66.03	67.96	69.92	71.91	73.94	75.99	78.07	80.19	22
23	64.00	65.88	67.79	69.74	71.71	73.72	75.76	77.82	79.92	82.05	23
24	65.76	67.65	69.58	71.54	73.53	75.56	77.61	79.69	81.81	83.95	24
25	67.55	69.46	71.40	73.38	75.39	77.42	79.49	81.59	83.72	85.88	25
26	69.37	71.30	73.26	75.25	77.27	79.32	81.40	83.52	85.66	87.84	26
27	71.22	73.16	75.14	77.15	79.18	81.25	83.35	85.48	87.64	89.83	27
28	73.10	75.06	77.05	79.07	81.13	83.21	85.32	87.47	89.65	91.85	28
29	75.02	76.99	79.00	81.03	83.10	85.20	87.33	89.49	91.68	93.90	29
30	76.96	78.95	80.97	83.02	85.11	87.22	89.37	91.54	93.75	95.99	30
31	78.94	80.94	82.98	85.05	87.15	89.27	91.44	93.63	95.85	98.10	31
32	80.94	82.96	85.02	87.10	89.21	91.36	93.53	95.74	97.98	100.25	32
33	82.98	85.02	87.08	89.18	91.31	93.47	95.66	97.89	100.14	102.42	33
34	85.05	87.10	89.18	91.30	93.44	95.62	97.82	100.05	102.33	104.63	34
35	87.15	89.21	91.31	93.44	95.60	97.79	100.02	102.27	104.55	106.87	35
36	89.27	91.36	93.47	95.62	97.79	100.00	102.24	104.51	106.81	109.14	36
37	91.44	93.53	95.66	97.82	100.02	102.24	104.49	106.77	109.09	111.44	37
38	93.63	95.74	97.89	100.05	102.27	104.51	106.77	109.07	111.40	113.77	38
39	95.85	97.98	100.14	102.33	104.55	106.81	109.09	111.40	113.75	116.13	39
40	98.10	100.25	102.42	104.63	106.87	109.14	111.44	113.77	116.13	118.52	40
41	100.39	102.55	104.74	106.96	109.21	111.50	113.81	116.16	118.53	120.94	41
42	102.70	104.88	107.08	109.32	111.59	113.89	116.22	118.58	120.97	123.40	42
43	105.05	107.24	109.46	111.71	114.00	116.31	118.66	121.03	123.44	125.88	43
44	107.42	109.63	111.87	114.14	116.44	118.77	121.13	123.52	125.94	128.40	44
45	109.83	112.05	114.31	116.59	118.90	121.25	123.63	126.03	128.47	130.94	45
46	112.27	114.51	116.77	119.07	121.40	123.77	126.16	128.58	131.03	133.52	46
47	114.74	116.99	119.27	121.59	123.94	126.31	128.72	131.16	133.63	136.13	47
48	117.24	119.51	121.81	124.14	126.50	128.89	131.31	133.77	136.25	138.77	48
49	119.77	122.05	124.37	126.71	129.09	131.50	133.94	136.40	138.90	141.44	49
50	122.33	124.63	126.96	129.32	131.71	134.14	136.59	139.07	141.59	144.14	50
	31	32	33	34	35	36	37	38	39	40	

TABLE II.—BASE 30—SLOPES 1¼ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	48.72	50.56	52.42	54.32	56.25	58.21	60.20	62.22	64.27	66.36	0
1	49.92	51.78	53.66	55.57	57.51	59.49	61.50	63.53	65.60	67.70	1
2	51.13	53.02	54.88	56.85	58.79	60.80	62.85	64.93	67.05	69.07	2
3	52.42	54.31	56.22	58.16	60.14	62.15	64.18	66.25	68.35	70.48	3
4	53.72	55.62	57.55	59.51	61.50	63.52	65.57	67.65	69.77	71.92	4
5	55.05	56.96	58.90	60.88	62.89	64.92	66.99	69.09	71.22	73.38	5
6	56.40	58.33	60.29	62.28	64.30	66.36	68.44	70.56	72.70	74.88	6
7	57.79	59.74	61.71	63.72	65.76	67.82	69.92	72.05	74.21	76.40	7
8	59.21	61.17	63.16	65.19	67.24	69.32	71.44	73.58	75.76	77.96	8
9	60.66	62.64	64.65	66.68	68.75	70.85	72.98	75.14	77.33	79.55	9
10	62.15	64.14	66.16	68.21	70.29	72.41	74.55	76.73	78.94	81.17	10
11	63.66	65.66	67.70	69.77	71.87	74.00	76.16	78.35	80.57	82.82	11
12	65.20	67.22	69.27	71.36	73.47	75.62	77.79	80.00	82.24	84.51	12
13	66.77	68.81	70.88	72.98	75.11	77.27	79.46	81.68	83.94	86.22	13
14	68.38	70.43	72.52	74.63	76.77	78.95	81.16	83.40	85.66	87.96	14
15	70.02	72.08	74.18	76.31	78.47	80.66	82.89	85.14	87.42	89.74	15
16	71.68	73.77	75.88	78.02	80.20	82.41	84.65	86.91	89.21	91.54	16
17	73.38	75.48	77.61	79.77	81.96	84.18	86.46	88.72	91.03	93.38	17
18	75.11	77.22	79.37	81.54	83.75	85.99	88.26	90.56	92.89	95.25	18
19	76.87	79.00	81.16	83.35	85.57	87.82	90.11	92.42	94.77	97.15	19
20	78.66	80.80	82.98	85.19	87.42	89.69	91.99	94.32	96.68	99.07	20
21	80.48	82.64	84.83	87.05	89.31	91.59	93.90	96.25	98.63	101.13	21
22	82.33	84.51	86.71	88.95	91.22	93.52	95.85	98.21	100.60	103.02	22
23	84.21	86.40	88.63	90.88	93.16	95.48	97.82	100.20	102.61	105.05	23
24	86.13	88.33	90.57	92.84	95.14	97.47	99.83	102.22	104.64	107.10	24
25	88.07	90.29	92.55	94.83	97.15	99.49	101.87	104.27	106.71	109.18	25
26	90.05	92.28	94.55	96.85	99.18	101.54	103.94	106.36	108.81	111.30	26
27	92.05	94.31	96.59	98.90	101.25	103.63	106.03	108.47	110.94	113.44	27
28	94.09	96.36	98.66	100.99	103.35	105.74	108.16	110.62	113.10	115.62	28
29	96.16	98.44	100.76	103.10	105.48	107.89	110.32	112.79	115.29	117.82	29
30	98.25	100.56	102.89	105.25	107.64	110.06	112.52	115.00	117.52	120.06	30
31	100.39	102.70	105.05	107.42	109.83	112.27	114.74	117.24	119.77	122.33	31
32	102.55	104.88	107.24	109.63	112.05	114.51	116.99	119.51	122.05	124.63	32
33	104.74	107.08	109.46	111.87	114.31	116.77	119.27	121.81	124.37	126.96	33
34	106.96	109.32	111.71	114.14	116.59	119.07	121.59	124.14	126.71	129.32	34
35	109.21	111.59	114.00	116.44	118.90	121.40	123.94	126.50	129.09	131.71	35
36	111.50	113.89	116.31	118.77	121.25	123.77	126.31	128.89	131.50	134.14	36
37	113.81	116.22	118.66	121.13	123.63	126.16	128.72	131.31	133.94	136.59	37
38	116.16	118.58	121.03	123.52	126.03	128.58	131.16	133.77	136.40	139.07	38
39	118.53	120.97	123.44	125.94	128.47	131.03	133.63	136.25	138.90	141.59	39
40	120.94	123.40	125.88	128.40	130.94	133.52	136.13	138.77	141.44	144.14	40
41	123.38	125.85	128.35	130.88	133.44	136.03	138.66	141.31	144.00	146.71	41
42	125.85	128.33	130.85	133.40	135.97	138.58	141.22	143.89	146.59	149.32	42
43	128.35	130.85	133.38	135.94	138.53	141.16	143.81	146.50	149.21	151.96	43
44	130.88	133.40	135.94	138.52	141.13	143.77	146.44	149.14	151.87	154.63	44
45	133.44	135.97	138.53	141.13	143.75	146.40	149.09	151.81	154.55	157.33	45
46	136.03	138.58	141.16	143.77	146.40	149.07	151.77	154.51	157.27	160.06	46
47	138.66	141.22	143.81	146.44	149.09	151.77	154.49	157.24	160.02	162.82	47
48	141.31	143.89	146.50	149.14	151.81	154.51	157.24	160.00	162.79	165.62	48
49	144.00	146.59	149.21	151.87	154.55	157.27	160.02	162.79	165.60	168.44	49
50	146.71	149.32	151.96	154.63	157.33	160.06	162.82	165.62	168.44	171.30	50
	41	42	43	44	45	46	47	48	49	50	

TABLE III.—BASE 18—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.35	0.74	1.17	1.63	2.13	2.67	3.24	3.85	4.50	5.18	0
1	0.72	1.13	1.57	2.05	2.57	3.13	3.72	4.35	5.02	5.72	1
2	1.13	1.55	2.02	2.52	3.05	3.63	4.24	4.89	5.57	6.30	2
3	1.57	2.02	2.50	3.02	3.57	4.17	4.80	5.46	6.17	6.91	3
4	2.05	2.52	3.02	3.55	4.13	4.74	5.39	6.07	6.80	7.55	4
5	2.57	3.05	3.57	4.13	4.72	5.35	6.02	6.72	7.46	8.24	5
6	3.13	3.63	4.17	4.74	5.35	6.00	6.68	7.41	8.17	8.96	6
7	3.72	4.24	4.80	5.39	6.02	6.68	7.39	8.13	8.91	9.72	7
8	4.35	4.89	5.46	6.07	6.72	7.41	8.13	8.89	9.68	10.52	8
9	5.02	5.57	6.17	6.80	7.46	8.17	8.91	9.68	10.50	11.35	9
10	5.72	6.30	6.91	7.55	8.24	8.96	9.72	10.52	11.35	12.22	10
11	6.46	7.05	7.68	8.35	9.05	9.80	10.57	11.39	12.24	13.13	11
12	7.24	7.85	8.50	9.18	9.91	10.67	11.46	12.30	13.17	14.07	12
13	8.05	8.68	9.35	10.05	10.80	11.57	12.39	13.24	14.13	15.05	13
14	8.97	9.55	10.24	10.96	11.72	12.52	13.35	14.22	15.13	16.07	14
15	9.80	10.46	11.17	11.91	13.68	13.50	14.35	15.24	16.17	17.13	15
16	10.72	11.41	12.13	12.89	13.68	14.52	15.39	16.30	17.24	18.22	16
17	11.68	12.39	13.13	13.91	14.72	15.57	16.46	17.39	18.35	19.35	17
18	12.68	13.41	14.17	14.96	15.80	16.67	17.57	18.52	19.50	20.52	18
19	13.72	14.46	15.24	16.05	16.91	17.80	18.72	19.68	20.68	21.72	19
20	14.80	15.55	16.35	17.18	18.05	18.96	19.91	20.89	21.81	22.96	20
21	15.91	16.68	17.50	18.35	19.24	20.17	20.13	22.13	23.17	24.24	21
22	17.05	17.85	18.68	19.55	20.46	21.41	22.39	23.41	24.46	25.55	22
23	18.24	19.05	19.91	20.80	21.72	22.68	23.68	24.72	25.80	26.97	23
24	19.46	20.30	21.17	22.07	23.02	24.00	25.02	26.07	27.17	28.30	24
25	20.72	21.57	22.46	23.39	24.35	25.35	26.39	27.46	28.57	29.72	25
26	22.02	22.89	23.80	24.74	25.72	26.74	27.80	28.89	30.02	31.18	26
27	23.35	24.24	25.17	26.13	27.13	28.17	29.24	30.35	31.50	32.68	27
28	24.72	25.63	26.57	27.55	28.57	29.63	30.72	31.85	33.02	34.22	28
29	26.13	27.05	28.02	29.02	30.05	31.13	32.24	33.39	34.57	35.80	29
30	27.57	28.52	29.50	30.52	31.57	32.67	33.80	34.96	36.17	37.41	30
31	29.05	30.02	31.02	32.05	33.13	34.24	35.39	36.57	37.80	39.05	31
32	30.57	31.55	32.57	33.63	34.72	35.85	37.02	38.22	39.46	40.74	32
33	32.13	33.13	34.17	35.24	36.35	37.50	38.68	39.91	41.17	42.46	33
34	33.72	34.74	35.80	36.89	38.02	39.18	40.39	41.63	42.91	44.22	34
35	35.35	36.39	37.46	38.57	39.72	40.91	42.13	43.39	44.68	46.02	35
36	37.02	38.07	39.17	40.30	41.46	42.67	43.91	45.18	46.50	47.85	36
37	38.72	39.80	40.91	42.05	43.74	44.46	45.72	47.02	48.35	49.72	37
38	40.46	41.55	42.68	43.85	45.05	46.30	47.57	48.89	50.24	51.63	38
39	42.24	43.35	44.50	45.68	46.91	48.17	49.46	50.80	52.17	53.57	39
40	44.05	45.18	46.35	47.55	48.80	50.07	51.39	52.74	54.13	55.55	40
41	45.91	47.05	48.24	49.46	50.72	52.02	53.35	54.72	56.13	57.57	41
42	47.80	48.96	50.17	51.41	52.68	54.00	55.35	56.74	58.17	59.63	42
43	49.72	50.91	52.13	53.39	54.68	56.02	57.39	58.80	60.24	61.72	43
44	51.68	52.89	54.13	55.41	56.72	58.07	59.46	60.89	62.35	63.85	44
45	53.68	54.91	56.17	57.46	58.80	60.17	61.57	63.02	64.50	66.02	45
46	55.72	56.96	58.24	59.55	60.91	62.30	63.72	65.18	66.68	68.22	46
47	57.80	59.05	60.35	61.68	62.05	64.46	65.91	67.39	68.91	70.46	47
48	59.91	61.18	62.50	63.85	65.24	66.67	68.13	69.63	71.17	72.74	48
49	62.05	63.35	64.68	66.05	67.46	68.91	70.39	71.91	73.46	75.05	49
50	64.24	65.55	66.91	68.30	69.72	71.18	72.68	74.22	75.80	77.41	50
	1	2	3	4	5	6	7	8	9	10	

TABLE III.—BASE 18—SLOPES 1½ to 1.

Feet	11	12	13	14	15	16	17	18	19	20	Feet
0	5.91	6.67	7.46	8.30	9.17	10.07	11.02	12.00	13.02	14.07	0
1	6.46	7.24	8.05	8.97	9.80	10.72	11.68	12.68	13.72	14.80	1
2	7.05	7.85	8.68	9.55	10.46	11.41	12.39	13.41	14.46	15.55	2
3	7.68	8.50	9.35	10.24	11.17	12.13	13.13	14.17	15.24	16.35	3
4	8.35	9.18	10.05	10.96	11.91	12.89	13.91	14.96	16.05	17.18	4
5	9.05	9.91	10.80	11.72	12.68	13.68	14.72	15.80	16.91	18.05	5
6	9.80	10.67	11.57	12.52	13.50	14.52	15.57	16.67	17.80	18.96	6
7	10.57	11.46	12.39	13.35	14.35	15.39	16.46	17.57	18.72	19.91	7
8	11.39	12.30	13.24	14.22	15.24	16.30	17.39	18.52	19.68	20.89	8
9	12.24	13.17	14.13	15.13	16.17	17.24	18.35	19.50	20.68	21.91	9
10	13.13	14.07	15.05	16.07	17.13	18.22	19.35	20.52	21.72	22.96	10
11	14.05	15.02	16.02	17.05	18.13	19.24	20.39	21.57	22.80	24.05	11
12	15.02	16.00	17.02	18.07	19.17	20.30	21.46	22.67	23.91	25.18	12
13	16.02	17.02	18.05	19.13	20.24	21.39	22.57	23.80	25.05	26.35	13
14	17.05	18.07	19.13	20.22	21.35	22.52	23.72	24.96	26.24	27.55	14
15	18.13	19.17	20.24	21.35	22.50	23.68	24.91	26.17	27.46	28.80	15
16	19.24	20.30	21.39	22.52	23.68	24.89	26.13	27.41	28.72	30.07	16
17	20.29	21.46	22.57	23.72	24.91	26.13	27.39	28.68	30.02	31.39	17
18	21.57	22.67	23.80	24.96	26.17	24.41	28.68	30.00	31.35	32.74	18
19	22.80	23.91	25.05	26.24	24.46	28.72	30.02	31.35	32.72	34.13	19
20	24.05	25.18	26.35	27.55	28.80	30.07	31.39	32.74	34.13	35.55	20
21	25.35	26.50	27.68	28.91	30.17	31.46	32.80	34.17	35.57	37.02	21
22	26.68	27.85	29.05	30.30	31.57	32.89	34.24	35.63	37.05	38.52	22
23	28.05	29.24	30.46	31.72	33.02	34.35	35.72	37.13	38.57	40.05	23
24	29.46	30.67	31.91	33.18	34.50	35.85	37.24	38.67	40.13	41.63	24
25	30.91	32.13	33.39	34.68	36.02	37.39	38.80	40.24	41.72	43.24	25
26	32.39	33.63	34.91	36.22	37.57	38.96	40.39	41.85	43.35	44.89	26
27	33.91	35.17	36.46	37.80	39.17	40.57	42.02	43.50	45.02	46.57	27
28	35.46	36.74	38.05	39.41	40.80	42.22	43.68	45.18	46.72	48.30	28
29	37.05	38.35	39.68	41.05	42.46	43.91	45.39	46.91	48.46	50.05	29
30	38.68	40.00	41.35	42.74	44.17	45.63	47.13	48.67	50.24	51.85	30
31	40.35	41.68	43.05	44.46	45.91	47.39	48.91	50.46	52.05	53.68	31
32	42.05	43.41	44.80	46.22	47.68	49.18	50.72	52.30	53.91	55.55	32
33	43.80	45.17	46.57	48.02	49.50	51.02	52.57	54.17	55.80	57.46	33
34	45.57	46.96	48.39	49.85	51.35	52.89	54.46	56.07	57.72	59.41	34
35	47.39	48.80	50.24	51.72	53.24	54.80	56.39	58.02	59.68	61.39	35
36	49.24	50.67	52.13	53.63	55.17	56.74	58.35	60.00	61.68	63.41	36
37	51.13	52.57	54.05	55.57	57.13	58.72	60.35	62.02	63.72	65.46	37
38	53.05	54.52	56.02	57.55	59.13	60.74	62.39	64.07	65.80	67.55	38
39	55.02	56.50	58.02	59.57	61.17	62.80	64.46	66.17	67.91	69.68	39
40	57.02	58.52	60.05	61.63	63.24	64.89	66.57	68.30	70.05	71.85	40
41	59.05	60.57	62.13	63.72	65.35	67.02	68.72	70.46	72.24	74.05	41
42	61.13	62.67	64.24	65.85	67.50	69.18	70.91	72.67	74.46	76.30	42
43	63.24	64.80	66.39	68.02	69.68	71.39	73.13	74.91	76.72	78.57	43
44	65.39	66.96	68.57	70.22	71.91	73.63	75.39	77.18	79.02	80.89	44
45	67.57	69.17	70.80	72.46	74.17	75.91	77.68	79.50	81.35	83.24	45
46	69.80	71.41	73.05	74.74	76.46	78.22	80.02	81.85	83.72	85.63	46
47	72.05	73.68	75.35	77.05	78.80	80.57	82.39	84.24	86.13	88.05	47
48	74.35	76.00	77.68	79.41	81.17	82.96	84.80	86.67	88.57	90.52	48
49	76.68	78.35	80.05	81.80	83.57	85.39	87.24	89.13	91.05	93.02	49
50	79.05	80.74	82.46	84.22	86.02	87.85	89.72	91.63	93.57	95.55	50
	11	12	13	14	15	16	17	18	19	20	

TABLE III.—BASE 18—SLOPES $1\frac{1}{2}$ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	15.17	16.30	17.46	18.67	19.91	21.18	22.50	23.85	25.24	26.67	0
1	15.91	17.05	18.24	19.46	20.72	22.02	23.35	24.72	26.13	27.57	1
2	16.68	17.85	19.05	20.30	21.57	22.89	24.24	25.63	27.05	28.52	2
3	17.50	18.68	19.91	21.17	22.46	23.80	25.17	26.57	28.02	29.50	3
4	18.35	19.55	20.80	22.07	23.39	24.74	26.13	27.55	29.02	30.52	4
5	19.24	20.46	21.72	23.02	24.35	25.72	27.13	28.57	30.05	31.57	5
6	20.17	21.41	22.68	24.00	25.35	26.74	28.17	29.63	31.13	32.67	6
7	21.13	22.39	23.68	25.02	26.39	27.80	29.24	30.72	32.24	33.80	7
8	22.13	23.41	24.72	26.07	27.46	28.89	30.35	31.85	33.39	34.96	8
9	23.17	24.46	25.80	27.17	28.57	30.02	31.50	33.02	34.57	36.17	9
10	24.24	25.55	26.97	28.30	29.72	31.18	32.68	34.22	35.80	37.41	10
11	25.35	26.68	28.05	29.46	30.91	32.39	33.91	35.46	37.05	38.68	11
12	26.50	27.85	29.24	30.67	32.13	33.63	35.17	36.74	38.35	40.00	12
13	27.68	29.05	30.46	31.91	33.39	34.91	36.46	38.05	39.68	41.35	13
14	28.91	30.30	31.72	33.18	34.68	36.22	37.80	39.41	41.05	42.74	14
15	30.17	31.57	33.02	34.50	36.02	37.57	39.17	40.80	42.46	44.17	15
16	31.46	32.89	34.35	35.85	37.39	38.96	40.57	42.22	43.91	45.63	16
17	32.80	34.24	35.72	37.24	38.80	40.39	42.02	43.68	45.39	47 13	17
18	34.17	35.63	37.13	38.67	40.24	41.85	43.50	45.18	46.91	48.67	18
19	35.57	37.05	38.57	40.13	41.72	43.35	45.02	46.72	48.46	50.24	19
20	37.02	38.52	40.05	41.63	43.24	44.89	46.57	48.30	50.05	51.85	20
21	38.50	40.02	41.57	43.17	44.80	46.46	48.17	49.91	51.68	53.50	21
22	40.02	41.55	43.13	44.74	46.39	48.07	49.80	51.55	53.35	55.18	22
23	41.57	43.13	44.72	46.35	48.02	49.72	51.46	53.24	55.05	56.91	23
24	43.17	44.74	46.35	48.00	49.68	51.41	53.17	54.96	56.80	58.67	24
25	44.80	46.39	48.02	49.68	51.39	53.13	54.91	56.72	58.57	60.46	25
26	46.46	48.07	49.72	51.41	53.13	54.89	56.68	58.52	60.39	62.30	26
27	48.17	49.80	51.46	53.17	54.91	56.68	58.50	60.35	62.24	64.17	27
28	49.91	51.55	53.24	54.96	56.72	58.52	60.35	62.22	64.13	66.07	28
29	51.68	53.35	55.05	56.80	58.57	60.39	62.24	64.13	66.05	68.02	29
30	53.50	55.18	56.91	58.67	60.46	62.30	64.17	66.07	68.02	70.00	30
31	55.35	57.05	58.80	60.57	62.39	64.24	66.13	68.05	70.02	72.02	31
32	57.24	58.96	60.72	62.52	64.35	66.22	68.13	70.07	72.05	74.07	32
33	59.17	60.91	62.68	64.50	66.35	68.24	70.17	72.13	74.13	76.17	33
34	61.13	62.89	64.68	66.52	68.39	70.30	72.24	74.22	76.24	78.30	34
35	63.13	64.91	66.72	68.57	70.46	72.39	74.35	76.85	78.39	80.46	35
36	65.17	66.96	68.80	70.67	72.57	74.52	76.50	78.52	80.57	82.67	36
37	67.24	69.05	70.91	72.80	74.72	76.68	78.68	80.72	82.80	84.91	37
38	69.35	71.18	73.05	74.96	76.91	78.89	80.91	82.96	85.05	87.18	38
39	71.50	73.35	75.24	77.17	79.13	81.13	83.17	85.24	87.35	89.50	39
40	73.68	75.55	77.46	79.41	81.39	83.41	85.46	87.55	89.68	91.85	40
41	75.91	77.80	79.72	81.68	83.68	85.72	87.80	89.91	92.05	94.24	41
42	78.17	80.07	82.02	84.00	86.02	88.07	90.17	92.30	94.46	96.67	42
43	80.46	82.39	84.35	86.35	88.39	90.46	92.57	94.72	96.91	99.13	43
44	82.80	84.74	86.72	88.74	90.80	92.89	95.02	97.18	99.39	101.63	44
45	85.17	87.13	89.13	91.17	93.24	95.35	97.50	99.68	101.91	104.17	45
46	87.57	89.55	91.57	93.63	95.72	97.85	100.02	102.22	104.46	106.74	46
47	90.02	92.02	94.05	96.13	98.24	100.39	102.57	104.80	107.05	109.35	47
48	92.50	94.52	96.57	98.67	100.80	102.96	105.17	107.41	109.68	112.00	48
49	95.02	97.05	99.13	101.24	103.39	105.57	107.80	110.05	112.35	114.68	49
50	97.57	99.63	101.72	103.85	106.02	108.22	110.46	112.74	115.05	117.41	50
	21	22	23	24	25	26	27	28	29	30	

TABLE III.—BASE 18—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	28.13	29.63	31.17	32.74	34.35	36.00	37.68	39.41	41.17	42.96	0
1	29.05	30.57	32.13	33.72	35.35	37.02	38.72	40.46	42.24	44.05	1
2	30.02	31.55	33.13	34.74	36.39	38.07	39.80	41.55	43.35	45.18	2
3	31.02	32.57	34.17	35.80	37.46	39.17	40.91	42.68	44.50	46.35	3
4	32.05	33.63	35.24	36.89	38.57	40.30	42.05	43.85	45.68	47.55	4
5	33.13	34.72	36.35	38.02	39.72	41.46	43.74	45.05	46.91	48.80	5
6	34.24	35.85	37.50	39.18	40.91	42.67	44.46	46.30	48.17	50.07	6
7	35.39	37.02	38.68	40.39	42.13	43.91	45.72	47.57	49.46	51.39	7
8	36.57	38.22	39.91	41.63	43.39	45.18	47.02	48.89	50.80	52.74	8
9	37.80	39.46	41.17	42.91	44.68	46.50	48.35	50.24	52.17	54.13	9
10	39.05	40.74	42.46	44.22	46.02	47.85	49.72	51.63	53.57	55.55	10
11	40.35	42.05	43.80	45.57	47.39	49.24	51.13	53.05	55.02	57.02	11
12	41.68	43.41	45.17	46.96	48.80	50.67	52.57	54.52	56.50	58.52	12
13	43.05	44.80	46.57	48.39	50.24	52.13	54.05	56.02	58.02	60.05	13
14	44.46	46.22	48.02	49.85	51.72	53.63	55.57	57.55	59.57	61.63	14
15	45.91	47.68	49.50	51.35	53.24	55.17	57.13	59.13	61.17	63.24	15
16	47.39	49.18	51.02	52.89	54.80	56.74	58.72	60.74	62.80	64.89	16
17	48.91	50.72	52.57	54.46	56.39	58.35	60.35	62.39	64.46	66.57	17
18	50.46	52.30	54.17	56.07	58.02	60.00	62.02	64.07	66.17	68.30	18
19	52.05	53.91	55.80	57.72	59.68	61.68	63.72	65.80	67.91	70.05	19
20	53.68	55.55	57.46	59.41	61.39	63.41	65.46	67.55	69.68	71.85	20
21	55.35	57.24	59.17	61.13	63.13	65.17	67.24	69.35	71.50	73.68	21
22	57.05	58.96	60.91	62.89	64.91	66.96	69.05	71.18	73.35	75.55	22
23	58.80	60.72	62.68	64.68	66.72	68.80	70.91	73.05	75.24	77.46	23
24	60.57	62.52	64.50	66.52	68.57	70.67	72.80	74.96	77.17	79.41	24
25	62.39	64.35	66.35	68.39	70.46	72.57	74.72	76.91	79.13	81.39	25
26	64.24	66.22	68.24	70.30	72.39	74.52	76.68	78.89	81.13	83.41	26
27	66.13	68.13	70.17	72.24	74.35	76.50	78.68	80.91	83.17	85.46	27
28	68.05	70.07	72.13	74.22	76.85	78.52	80.72	82.96	85.24	87.55	28
29	70.02	72.05	74.13	76.24	78.39	80.57	82.80	85.05	87.35	89.68	29
30	72.02	74.07	76.17	78.30	80.46	82.67	84.91	87.18	89.50	91.85	30
31	74.05	76.13	78.24	80.39	82.57	84.80	87.05	89.35	91.68	94.05	31
32	76.13	78.22	80.35	82.52	84.72	86.96	89.24	91.55	93.91	96.30	32
33	78.24	80.35	82.50	84.68	86.91	89.17	91.46	93.80	96.17	98.57	33
34	80.39	82.52	84.68	86.89	89.13	91.41	93.72	96.07	98.46	100.89	34
35	82.57	84.72	86.91	89.13	91.39	93.68	96.02	98.39	100.80	103.24	35
36	84.80	86.96	89.17	91.41	93.68	96.00	98.35	100.74	103.17	105.63	36
37	87.05	89.24	91.46	93.72	96.02	98.35	100.72	103.13	105.57	108.05	37
38	89.35	91.55	93.80	96.07	98.39	100.74	103.13	105.55	108.02	110.52	38
39	91.68	93.91	96.17	98.46	100.80	103.17	105.57	108.02	110.50	113.02	39
40	94.05	96.30	98.57	100.89	103.24	105.63	108.05	110.52	113.02	115.55	40
41	96.46	98.72	101.02	103.35	105.72	108.13	110.57	113.05	115.57	118.13	41
42	98.91	101.18	103.50	105.85	108.24	110.67	113.13	115.63	118.17	120.74	42
43	101.39	103.68	106.02	108.39	110.80	113.24	115.72	118.24	120.80	123.39	43
44	103.91	106.22	108.57	110.96	113.39	115.85	118.35	120.89	123.46	126.07	44
45	106.46	108.80	111.17	113.57	116.02	118.50	121.02	123.57	126.17	128.80	45
46	109.05	111.41	113.80	116.22	118.68	121.18	123.72	126.30	128.91	131.51	46
47	111.68	114.05	116.46	118.91	121.39	123.91	126.46	129.05	131.68	134.35	47
48	114.35	116.74	119.17	121.63	124.13	126.67	129.24	131.85	134.50	137.18	48
49	117.05	119.46	121.91	124.39	126.91	129.46	132.05	134.68	137.35	140.05	49
50	119.80	122.22	124.68	127.18	129.72	132.30	134.91	137.55	140.24	142.96	50
	31	32	33	34	35	36	37	38	39	40	

TABLE III.—BASE 18—SLOPES 1½ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	44.80	46.67	48.57	50.52	52.50	54.52	56.57	58.67	60.80	62.96	0
1	45.91	47.80	49.72	51.68	53.68	55.72	57.80	59.91	62.05	64.24	1
2	47.05	48.96	50.91	52.89	54.91	56.96	59.05	61.18	63.35	65.55	2
3	48.24	50.17	52.13	54.13	56.17	58.24	60.35	62.50	64.68	66.91	3
4	49.46	51.41	53.39	55.41	57.46	59.55	61.68	63.85	66.05	68.30	4
5	50.72	52.68	54.68	56.72	58.80	60.91	62.05	65.24	67.46	69.72	5
6	52.02	54.00	56.02	58.07	60.17	62.30	64.46	66.67	68.91	71.18	6
7	53.35	55.35	57.39	59.46	61.57	63.72	65.91	68.13	70.39	72.68	7
8	54.72	56.74	58.80	60.89	63.02	65.18	67.39	69.63	71.91	74.22	8
9	56.13	58.17	60.24	62.35	64.50	66.68	68.91	71.17	73.46	75.80	9
10	57.57	59.63	61.72	63.85	66.02	68.22	70.46	72.74	75.05	77.41	10
11	59.05	61.13	63.24	65.39	67.57	69.80	72.05	74.35	76.68	79.05	11
12	60.57	62.67	64.80	66.96	69.17	71.41	73.68	76.00	78.35	80.74	12
13	62.13	64.24	66.39	68.57	70.80	73.05	75.35	77.68	80.05	82.46	13
14	63.72	65.85	68.02	70.22	72.46	74.74	77.05	79.41	81.80	84.22	14
15	65.35	67.50	69.68	71.91	74.17	76.46	78.80	81.17	83.57	86.02	15
16	67.02	69.18	71.39	73.63	75.91	78.22	80.57	82.96	85.39	87.85	16
17	68.72	70.91	72.13	75.39	77.68	80.02	82.39	84.80	87.24	89.72	17
18	70.46	72.67	74.91	77.18	79.50	81.85	84.24	86.67	89.13	91.63	18
19	72.24	74.46	76.72	79.02	81.35	83.72	86.13	88.57	91.05	93.57	19
20	74.05	76.30	78.57	80.89	83.24	85.63	88.05	90.52	93.02	95.55	20
21	75.91	78.17	80.46	82.80	85.17	87.57	90.02	92.50	95.02	97.57	21
22	77.80	80.07	82.39	84.74	87.13	89.55	92.02	94.52	97.05	99.63	22
23	79.72	82.02	84.35	86.72	89.13	91.57	94.05	96.57	99.13	101.72	23
24	81.68	84.00	86.35	88.74	91.17	93.63	96.13	98.67	101.24	103.85	24
25	83.68	86.02	88.39	90.80	93.24	95.72	98.24	100.80	103.39	106.02	25
26	85.72	88.07	90.46	92.89	95.35	97.85	100.39	102.96	105.57	108.22	26
27	87.80	90.17	92.57	95.02	97.50	100.02	102.57	105.17	107.80	110.46	27
28	89.91	92.30	94.72	97.18	99.68	102.22	104.80	107.41	110.05	112.74	28
29	92.05	94.46	96.91	99.39	101.91	104.46	107.05	109.68	112.35	115.05	29
30	94.24	96.67	99.13	101.63	104.17	106.74	109.35	112.00	114.68	117.41	30
31	96.46	98.91	101.39	103.91	106.46	109.05	111.68	114.35	117.05	119.80	31
32	98.72	101.18	103.68	106.22	108.80	111.41	114.05	116.74	119.46	122.22	32
33	101.02	103.50	106.02	108.57	111.17	113.80	116.46	119.17	121.91	124.68	33
34	103.35	105.85	108.39	110.96	113.57	116.22	118.91	121.63	124.39	127.18	34
35	105.72	108.24	110.80	113.39	116.02	118.68	121.39	124.13	126.91	129.72	35
36	108.13	110.67	113.24	115.85	118.50	121.18	123.91	126.67	129.46	132.30	36
37	110.57	113.13	115.72	118.35	121.02	123.72	126.46	129.24	132.05	134.91	37
38	113.05	115.63	118.24	120.89	123.57	126.30	129.05	131.85	134.68	137.55	38
39	115.57	118.17	120.80	123.46	126.17	128.91	131.68	134.50	137.35	140.24	39
40	118.13	120.74	123.39	126.07	128.80	131.55	134.35	137.18	140.05	142.96	40
41	120.72	123.35	126.02	128.72	131.46	134.24	137.05	139.91	142.80	145.72	41
42	123.35	126.00	128.68	131.41	134.17	136.96	139.80	142.67	145.57	148.52	42
43	126.02	128.68	131.39	134.13	136.91	139.72	142.57	145.46	148.39	151.35	43
44	128.72	131.41	134.13	136.88	139.68	142.52	145.38	148.30	151.24	154.22	44
45	131.46	134.17	136.91	139.68	142.50	145.35	148.24	151.17	154.13	157.13	45
46	134.24	136.96	139.72	142.52	145.35	148.22	151.13	154.07	157.05	160.07	46
47	137.05	139.80	142.57	145.38	148.24	151.13	154.05	157.02	160.02	163.05	47
48	139.91	142.67	145.46	148.30	151.17	154.07	157.02	160.00	163.02	166.07	48
49	142.80	145.57	148.39	151.24	154.13	157.05	160.02	163.02	166.05	169.13	49
50	145.72	148.52	151.35	154.22	157.13	160.07	163.05	166.07	169.13	172.22	50
	41	42	43	44	45	46	47	48	49	50	

TABLE IV.—BASE 20—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.39	0.81	1.28	1.78	2.31	2.89	3.50	4.15	4.83	5.55	0
1	0.80	1.24	1.72	2.24	2.80	3.39	4.02	4.68	5.39	6.13	1
2	1.24	1.70	2.20	2.74	3.31	3.92	4.57	5.26	5.98	6.74	2
3	1.72	2.20	2.72	3.28	3.87	4.50	5.17	5.87	6.61	7.39	3
4	2.24	2.74	3.28	3.85	4.46	5.11	5.80	6.52	7.28	8.07	4
5	2.80	3.31	3.87	4.46	5.09	5.76	6.46	7.20	7.98	8.80	5
6	3.39	3.92	4.50	5.11	5.76	6.44	7.17	7.92	8.72	9.55	6
7	4.02	4.57	5.17	5.80	6.46	7.17	7.91	8.68	9.50	10.35	7
8	4.68	5.26	5.87	6.52	7.20	7.92	8.68	9.48	10.31	11.18	8
9	5.39	5.98	6.61	7.28	7.98	8.72	9.50	10.31	11.16	12.05	9
10	6.13	6.74	7.39	8.07	8.80	9.55	10.35	11.18	12.05	12.96	10
11	6.91	7.54	8.20	8.91	9.65	10.42	11.24	12.09	12.98	13.91	11
12	7.72	8.37	9.05	9.78	10.54	11.33	12.17	13.04	13.94	14.89	12
13	8.57	9.24	9.94	10.68	11.46	12.28	13.13	14.02	14.94	15.91	13
14	9.46	10.15	10.87	11.63	12.42	13.26	14.13	15.04	15.98	16.96	14
15	10.39	11.09	11.83	12.61	13.42	14.28	15.17	16.09	17.05	18.05	15
16	11.35	12.07	12.83	13.63	14.46	15.33	16.24	17.18	18.16	19.18	16
17	12.35	13.09	13.87	14.68	15.54	16.42	17.35	18.31	19.31	20.35	17
18	13.39	14.15	14.94	15.78	16.65	17.55	18.50	19.48	20.50	21.55	18
19	14.46	15.24	16.05	16.91	17.80	18.72	19.68	20.68	21.72	22.80	19
20	15.57	16.37	17.20	18.07	18.98	19.92	20.91	21.92	22.98	24.07	20
21	16.72	17.54	18.39	19.28	20.20	21.17	22.17	23.20	24.28	25.39	21
22	17.91	18.74	19.61	20.52	21.46	22.44	23.46	24.52	25.61	26.74	22
23	19.13	19.98	20.87	21.80	22.76	23.76	24.80	25.87	26.98	28.13	23
24	20.39	21.26	22.17	23.11	24.09	25.11	26.17	27.26	28.39	29.55	24
25	21.68	22.57	23.50	24.46	25.46	26.50	27.57	28.68	29.83	31.11	25
26	23.02	23.92	24.87	25.85	26.87	27.92	29.02	30.15	31.31	32.52	26
27	24.39	25.31	26.28	27.28	28.31	29.39	30.50	31.65	32.13	34.05	27
28	25.79	26.74	27.72	28.74	29.80	30.89	32.02	33.18	34.39	35.63	28
29	27.24	28.20	29.20	30.24	31.31	32.43	33.57	34.76	35.98	37.24	29
30	28.72	29.70	30.72	31.78	32.87	34.00	35.17	36.37	37.61	38.89	30
31	30.24	31.24	32.28	33.35	34.46	35.61	36.80	38.02	39.28	40.57	31
32	31.80	32.81	33.87	34.96	36.09	37.26	38.46	39.70	40.98	42.30	32
33	33.39	34.43	35.50	36.61	37.76	38.94	40.17	41.42	42.72	44.05	33
34	35.02	36.07	37.17	38.30	39.46	40.67	41.91	43.18	44.50	45.85	34
35	36.68	37.76	38.87	40.02	41.20	42.42	43.68	44.98	46.31	47.68	35
36	38.39	39.48	40.61	41.78	42.98	44.22	45.50	46.81	48.17	49.55	36
37	40.13	41.24	42.39	43.57	44.80	46.05	47.35	48.68	50.05	51.46	37
38	41.91	43.04	44.20	45.41	46.65	47.92	49.24	50.59	51.98	53.91	38
39	43.72	44.87	46.05	47.28	48.54	49.83	51.17	52.54	53.94	55.39	39
40	45.57	46.74	47.94	49.18	50.46	51.78	53.13	54.52	55.94	57.41	40
41	47.46	48.65	49.87	51.13	52.42	53.76	55.13	56.54	57.98	59.46	41
42	49.39	50.59	51.83	53.11	54.42	55.78	57.17	58.59	60.05	61.55	42
43	51.35	52.57	53.83	55.13	56.46	57.83	59.24	60.68	62.17	63.68	43
44	53.35	54.59	55.87	57.18	58.54	59.92	61.35	62.81	64.31	65.85	44
45	55.39	56.65	57.94	59.28	60.65	62.05	63.50	64.98	66.50	68.05	45
46	57.46	58.74	60.05	61.41	62.80	64.22	65.68	67.18	68.72	70.30	46
47	59.57	60.87	62.20	63.57	64.98	66.42	67.91	69.42	70.98	72.57	47
48	61.72	63.04	64.39	65.78	67.20	68.67	70.17	71.70	73.28	74.89	48
49	63.91	65.24	66.61	68.02	69.46	70.94	72.46	74.02	75.61	77.24	49
50	66.13	67.48	68.87	70.30	71.76	73.26	74.80	76.37	77.98	79.63	50
	1	2	3	4	5	6	7	8	9	10	

TABLE IV.—BASE 20—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	6.31	7.11	7.94	8.81	9.72	10.67	11.65	12.67	13.72	14.81	0
1	6.91	7.72	8.57	9.46	10.39	11.35	12.35	13.39	14.46	15.57	1
2	7.54	8.37	9.24	10.15	11.09	12.07	13.09	14.15	15.24	16.37	2
3	8.20	9.05	9.94	10.87	11.83	12.83	13.87	14.94	16.05	17.20	3
4	8.91	9.78	10.68	11.63	12.61	13.63	14.68	15.78	16.91	18.07	4
5	9.65	10.54	11.46	12.42	13.42	14.46	15.54	16.65	17.80	18.98	5
6	10.42	11.33	12.28	13.26	14.28	15.33	16.42	17.55	18.72	19.92	6
7	11.24	12.17	13.13	14.13	15.17	16.24	17.35	18.50	19.68	20.91	7
8	12.09	13.04	14.02	15.04	16.09	17.18	18.31	19.48	20.68	21.92	8
9	12.98	13.94	14.94	15.98	17.05	18.16	19.31	20.50	21.72	22.98	9
10	13.91	14.89	15.91	16.96	18.05	19.18	20.35	21.55	22.80	24.07	10
11	14.87	15.87	16.91	17.98	19.09	20.24	21.42	22.65	23.91	25.20	11
12	15.87	16.89	17.94	19.03	20.17	21.33	22.54	23.78	25.05	26.37	12
13	16.91	17.94	19.02	20.13	21.28	22.46	23.68	24.94	26.24	27.57	13
14	17.98	19.03	20.13	21.26	22.42	23.63	24.87	26.15	27.46	28.81	14
15	19.09	20.17	21.28	22.42	23.61	24.83	26.09	27.39	28.72	30.09	15
16	20.24	21.33	22.46	23.63	24.83	26.07	27.35	28.67	30.02	31.41	16
17	21.42	22.54	23.68	24.87	26.09	27.35	28.65	29.98	31.35	32.76	17
18	22.65	23.78	24.94	26.15	27.39	28.67	29.98	31.33	32.72	34.15	18
19	23.91	25.05	26.24	27.46	28.72	30.02	31.35	32.72	34.13	35.57	19
20	25.20	26.37	27.57	28.81	30.09	31.41	32.76	34.15	35.57	37.04	20
21	26.54	27.72	28.94	30.20	31.50	32.83	34.20	35.61	37.05	38.54	21
22	27.91	29.11	30.35	31.63	32.94	34.30	35.68	37.11	38.57	40.07	22
23	29.31	30.54	31.79	33.09	34.42	35.80	37.20	38.65	40.13	41.65	23
24	30.76	32.00	33.28	34.59	35.94	37.33	38.76	40.22	41.72	43.26	24
25	32.24	33.50	34.79	36.13	37.50	38.91	40.35	41.83	43.35	44.91	25
26	33.76	35.03	36.35	37.70	39.09	40.52	41.98	43.48	45.02	46.59	26
27	35.31	36.61	37.94	39.31	40.72	42.17	43.65	45.17	46.72	48.31	27
28	36.91	38.22	39.57	40.96	42.39	43.85	45.35	46.89	48.46	50.07	28
29	38.54	39.87	41.24	42.65	44.09	45.57	47.07	48.65	50.24	51.87	29
30	40.20	41.55	42.94	44.37	45.83	47.33	48.87	50.44	52.05	53.70	30
31	41.91	43.28	44.68	46.13	47.61	49.13	50.68	52.28	53.91	55.57	31
32	43.65	45.03	46.46	47.92	49.42	50.96	52.54	54.15	55.80	57.48	32
33	45.42	46.83	48.28	49.76	51.28	52.83	54.42	56.05	57.72	59.42	33
34	47.24	48.67	50.13	51.63	53.17	54.74	56.35	58.00	59.68	61.41	34
35	49.09	50.54	52.02	53.54	55.09	56.68	58.31	59.98	61.68	63.31	35
36	50.98	52.44	53.94	55.48	57.05	58.67	60.31	62.00	63.61	65.48	36
37	52.91	54.39	55.91	57.46	59.05	60.68	62.35	63.94	65.80	67.57	37
38	54.87	56.37	57.91	59.48	61.09	62.74	64.31	66.15	67.91	69.70	38
39	56.87	58.39	59.94	61.54	63.17	64.72	66.54	68.28	70.05	71.87	39
40	58.91	60.44	62.02	63.63	65.28	66.96	68.68	70.44	72.24	74.07	40
41	60.98	62.54	64.13	65.76	67.42	69.13	70.87	72.65	74.46	76.31	41
42	63.09	64.67	66.28	67.92	69.61	71.33	73.09	74.89	76.72	78.59	42
43	65.24	66.83	68.46	70.13	71.83	73.57	75.35	77.17	79.02	80.91	43
44	67.42	69.03	70.68	72.37	74.09	75.85	77.65	79.48	81.35	83.26	44
45	69.45	71.28	72.94	74.65	76.39	78.17	79.98	81.83	83.72	85.65	45
46	71.91	73.55	75.24	76.96	78.72	80.52	82.35	84.22	86.13	88.07	46
47	74.20	75.89	77.57	79.31	81.09	82.91	84.76	86.65	88.57	90.54	47
48	76.54	78.22	79.94	81.70	83.50	85.33	87.20	89.11	91.05	93.04	48
49	78.91	80.61	82.35	84.13	85.94	87.80	89.68	91.61	93.57	95.57	49
50	81.31	83.04	84.80	86.59	88.42	90.30	92.20	94.15	96.13	98.15	50
	11	12	13	14	15	16	17	18	19	20	

TABLE IV.—BASE 20—SLOPES 1½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	15.94	17.11	18.31	19.55	20.83	22.15	23.50	24.89	26.31	27.78	0
1	16.72	17.91	19.13	20.39	21.68	23.02	24.39	25.79	27.24	28.72	1
2	17.54	18.74	19.98	21.26	22.57	23.92	25.31	26.74	28.20	29.70	2
3	18.39	19.61	20.87	22.17	23.50	24.87	26.28	27.72	29.20	30.72	3
4	19.28	20.52	21.80	23.11	24.46	25.85	27.28	28.74	30.24	31.78	4
5	20.20	21.46	22.76	24.09	25.46	26.87	28.31	29.80	31.31	32.87	5
6	21.17	22.44	23.76	25.11	26.50	27.92	29.39	30.89	32.43	34.00	6
7	22.17	23.46	24.80	26.17	27.57	29.02	30.50	32.02	33.57	35.17	7
8	23.20	24.52	25.87	27.26	28.68	30.15	31.65	33.18	34.76	36.37	8
9	24.28	25.61	26.98	28.39	29.83	31.31	32.13	34.39	35.98	37.61	9
10	25.39	26.74	28.13	29.55	31.11	32.52	34.05	35.63	37.24	38.89	10
11	26.54	27.91	29.31	30.76	32.24	33.76	35.31	36.91	38.54	40.20	11
12	27.72	29.11	30.54	32.00	33.50	35.03	36.61	38.22	39.87	41.55	12
13	28.94	30.35	31.79	33.28	34.79	36.35	37.94	39.57	41.24	42.94	13
14	30.20	31.63	33.09	34.59	36.13	37.70	39.31	40.96	42.65	44.37	14
15	31.50	32.94	34.42	35.94	37.50	39.09	40.72	42.39	44.09	45.83	15
16	32.83	34.30	35.80	37.33	38.91	40.52	42.17	43.85	45.57	47.33	16
17	34.20	35.68	37.20	38.76	40.35	41.98	43.65	45.35	47.09	48.87	17
18	35.61	37.11	38.65	40.22	41.83	43.48	45.17	46.89	48.65	50.44	18
19	37.05	38.57	40.13	41.72	43.35	45.02	46.72	48.46	50.24	52.05	19
20	38.54	40.07	41.65	43.26	44.91	46.59	48.31	50.07	51.87	53.70	20
21	40.05	41.61	43.20	44.83	46.50	48.20	49.94	51.72	53.54	55.39	21
22	41.61	43.18	44.80	46.44	48.13	49.85	51.61	53.41	55.24	57.11	22
23	43.20	44.80	46.42	48.09	49.80	51.54	53.31	55.13	56.98	58.87	23
24	44.83	46.44	48.09	49.78	51.50	53.26	55.05	56.89	58.76	60.67	24
25	46.50	48.13	49.80	51.50	53.24	55.02	56.83	58.68	60.57	62.39	25
26	48.20	49.85	51.54	53.26	55.02	56.81	58.65	60.52	62.31	64.37	26
27	49.94	51.61	53.31	55.05	56.83	58.65	60.50	62.28	64.31	66.28	27
28	51.72	53.41	55.13	56.89	58.68	60.52	62.28	64.30	66.24	68.12	28
29	53.54	55.24	56.98	58.76	60.57	62.31	64.31	66.24	68.20	70.20	29
30	55.39	57.11	58.87	60.67	62.39	64.37	66.28	68.12	70.20	72.22	30
31	57.28	59.02	60.80	62.50	64.46	66.35	68.28	70.24	72.24	74.28	31
32	59.20	60.96	62.65	64.59	66.46	68.37	70.31	72.30	74.31	76.37	32
33	61.17	62.83	64.76	66.61	68.50	70.42	72.39	74.39	76.42	78.50	33
34	63.05	64.96	66.80	68.67	70.57	72.52	74.50	76.52	78.57	80.67	34
35	65.20	67.02	68.87	70.76	72.68	74.65	76.65	78.68	80.76	82.87	35
36	67.28	69.11	70.98	72.89	74.83	76.81	78.83	80.89	82.98	85.11	36
37	69.39	71.24	73.13	75.05	77.02	79.02	81.05	83.13	85.24	87.39	37
38	71.54	73.41	75.31	77.26	79.24	81.26	83.31	85.41	87.54	89.70	38
39	73.72	75.61	77.54	79.50	81.50	83.54	85.61	87.72	89.87	92.05	39
40	75.94	77.85	79.80	81.78	83.80	85.85	87.94	90.07	92.24	94.44	40
41	78.20	80.13	82.09	84.09	86.13	88.20	90.31	92.46	94.65	96.87	41
42	80.50	82.44	84.42	86.44	88.50	90.59	92.72	94.89	97.09	99.33	42
43	82.83	84.80	86.80	88.83	90.91	93.02	95.17	97.35	99.57	101.83	43
44	85.20	87.18	89.20	91.26	93.35	95.48	97.65	99.85	102.09	104.37	44
45	87.61	89.61	91.65	93.72	95.83	97.98	100.17	102.39	104.65	106.94	45
46	90.05	92.07	94.13	96.22	98.35	100.52	102.72	104.96	107.24	109.55	46
47	92.54	94.57	96.65	98.76	100.91	103.09	105.31	107.57	109.87	112.20	47
48	95.05	97.11	99.20	101.33	103.50	105.70	107.94	110.22	112.54	114.89	48
49	97.61	99.68	101.80	103.94	106.13	108.35	110.61	112.91	115.24	117.61	49
50	100.20	102.30	104.42	106.59	108.80	111.04	113.31	115.63	117.98	120.37	50
	21	22	23	24	25	26	27	28	29	30	

TABLE IV.—BASE 20—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	29.28	30.81	32.39	34.00	35.65	37.37	39.05	40.81	42.61	44.44	0
1	30.24	31.80	33.39	35.02	36.68	38.39	40.13	41.91	43.72	45.57	1
2	31.24	32.81	34.43	36.07	37.76	39.48	41.24	43.04	44.87	46.74	2
3	32.28	33.87	35.50	37.17	38.87	40.61	42.39	44.20	46.05	47.94	3
4	33.35	34.96	36.61	38.30	40.02	41.78	43.57	45.41	47.28	49.18	4
5	34.46	36.09	37.76	39.46	41.20	42.98	44.80	46.65	48.54	50.46	5
6	35.61	37.26	38.94	40.67	42.42	44.22	46.05	47.92	49.83	51.78	6
7	36.80	38.46	40.17	41.91	43.68	45.50	47.35	49.24	51.17	53.13	7
8	38.02	39.70	41.42	43.18	44.98	46.81	48.68	50.59	52.54	54.52	8
9	39.28	40.98	42.72	44.50	46.31	48.17	50.05	51.98	53.94	55.94	9
10	40.57	42.30	44.05	45.85	47.68	49.55	51.46	53.41	55.39	57.41	10
11	41.91	43.65	45.42	47.24	49.09	50.98	52.91	54.87	56.87	58.91	11
12	43.28	45.03	46.83	48.67	50.54	52.44	54.39	56.37	58.39	60.44	12
13	44.68	46.46	48.28	50.13	52.02	53.94	55.91	57.91	59.94	62.02	13
14	46.13	47.92	49.76	51.63	53.54	55.48	57.46	59.48	61.54	63.63	14
15	47.61	49.42	51.28	53.17	55.09	57.05	59.05	61.09	63.17	65.28	15
16	49.13	50.96	52.83	54.74	56.68	58.67	60.68	62.74	64.72	66.96	16
17	50.68	52.54	54.42	56.35	58.31	60.31	62.35	64.31	66.54	68.68	17
18	52.28	54.15	56.05	58.00	59.98	62.00	63.94	66.15	68.28	70.44	18
19	53.91	55.80	57.72	59.68	61.68	63.61	65.80	67.91	70.05	72.24	19
20	55.57	57.48	59.42	61.41	63.31	65.48	67.57	69.70	71.87	74.07	20
21	57.28	59.20	61.17	63.05	65.20	67.28	69.39	71.54	73.72	75.94	21
22	59.02	60.96	62.83	64.96	67.02	69.11	71.24	73.41	75.61	77.85	22
23	60.80	62.65	64.76	66.80	68.87	70.98	73.13	75.31	77.54	79.80	23
24	62.50	64.59	66.61	68.67	70.76	72.89	75.05	77.26	79.50	81.78	24
25	64.46	66.46	68.50	70.57	72.68	74.83	77.02	79.24	81.50	83.80	25
26	66.35	68.37	70.42	72.52	74.65	76.81	79.02	81.26	83.54	85.85	26
27	68.28	70.31	72.39	74.50	76.65	78.83	81.05	83.31	85.61	87.94	27
28	70.24	72.30	74.39	76.52	78.68	80.89	83.13	85.41	87.72	90.07	28
29	72.24	74.31	76.42	78.57	80.76	82.98	85.24	87.54	89.87	92.24	29
30	74.28	76.37	78.50	80.67	82.87	85.11	87.39	89.70	92.05	94.44	30
31	76.35	78.46	80.61	82.80	85.01	87.28	89.57	91.91	94.28	96.68	31
32	78.46	80.59	82.76	84.96	87.20	89.48	91.80	94.15	96.54	98.96	32
33	80.61	82.76	84.94	87.17	89.42	91.72	94.05	96.42	98.83	101.28	33
34	82.80	84.96	87.17	89.41	91.68	94.00	96.35	98.74	101.17	103.63	34
35	85.01	87.20	89.42	91.68	93.98	96.31	98.68	101.09	103.54	106.02	35
36	87.28	89.48	91.72	94.00	96.31	98.67	101.05	103.48	105.94	108.44	36
37	89.57	91.80	94.05	96.35	98.68	101.05	103.46	105.91	108.39	110.91	37
38	91.91	94.15	96.42	98.74	101.09	103.48	105.91	108.37	110.87	113.41	38
39	94.28	96.54	98.83	101.17	103.54	105.94	108.39	110.87	113.39	115.94	39
40	96.68	98.96	101.28	103.63	106.02	108.44	110.91	113.41	115.94	118.52	40
41	99.13	101.42	103.76	106.13	108.54	110.98	113.46	115.98	118.54	121.13	41
42	101.61	103.92	106.28	108.67	111.09	113.55	116.05	118.59	121.17	123.78	42
43	104.13	106.46	108.83	111.24	113.68	116.17	118.68	121.24	123.83	126.46	43
44	106.68	109.04	111.42	113.85	116.31	118.81	121.35	123.92	126.54	129.18	44
45	109.28	111.65	114.05	116.50	118.98	121.50	124.05	126.65	129.28	131.94	45
46	111.91	114.30	116.72	119.18	121.68	124.22	126.80	129.41	132.05	134.74	46
47	114.57	116.98	119.42	121.91	124.42	126.98	129.57	132.20	134.87	137.57	47
48	117.28	119.70	122.17	124.67	127.20	129.78	132.39	135.04	137.72	140.44	48
49	120.02	122.46	124.94	127.46	130.02	132.61	135.24	137.91	140.61	143.35	49
50	122.80	125.26	127.76	130.30	132.87	135.48	138.13	140.81	143.54	146.30	50
—	31	32	33	34	35	36	37	38	39	40	—

TABLE IV.—BASE 20—SLOPES 1½ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	46.31	48.22	50.17	52.15	54.17	56.22	58.31	60.44	62.61	64.81	0
1	47.46	49.39	51.35	53.35	55.39	57.46	59.57	61.72	63.91	66.13	1
2	48.65	50.59	52.57	54.59	56.65	58.74	60.87	63.04	65.24	67.48	2
3	49.87	51.83	53.83	55.87	57.94	60.05	62.20	64.39	66.61	68.87	3
4	51.13	53.11	55.13	57.18	59.28	61.41	63.57	65.78	68.02	70.30	4
5	52.42	54.42	56.46	58.54	60.65	62.80	64.98	67.20	69.46	71.76	5
6	53.76	55.78	57.83	59.92	62.05	64.22	66.42	68.67	70.94	73.26	6
7	55.13	57.17	59.24	61.35	63.50	65.68	67.91	70.17	72.46	74.80	7
8	56.54	58.59	60.68	62.81	64.98	67.18	69.42	71.70	74.02	76.37	8
9	57.98	60.05	62.17	64.31	66.50	68.72	70.98	73.28	75.61	77.98	9
10	59.46	61.55	63.68	65.85	68.05	70.30	72.57	74.89	77.24	79.63	10
11	60.98	63.09	65.24	67.42	69.45	71.91	74.20	76.54	78.91	81.31	11
12	62.54	64.67	66.83	69.03	71.28	73.55	75.87	78.22	80.61	83.04	12
13	64.13	66.28	68.46	70.68	72.94	75.24	77.57	79.94	82.35	84.80	13
14	65.76	67.92	70.13	72.37	74.65	76.96	79.31	81.70	84.13	86.59	14
15	67.42	69.61	71.83	74.09	76.39	78.72	81.09	83.50	85.94	88.42	15
16	69.13	71.33	73.57	75.85	78.17	80.52	82.91	85.33	87.80	90.30	16
17	70.87	73.09	75.35	77.65	79.98	82.35	84.76	87.20	89.68	92.20	17
18	72.65	74.89	77.17	79.48	81.83	84.22	86.65	89.11	91.61	94.15	18
19	74.46	76.72	79.02	81.35	83.72	86.13	88.57	91.05	93.57	96.13	19
20	76.31	78.59	80.91	83.26	85.65	88.07	90.54	93.04	95.57	98.15	20
21	78.20	80.50	82.83	85.20	87.61	90.05	92.54	95.05	97.61	100.20	21
22	80.13	82.44	84.80	87.18	89.61	92.07	94.57	97.11	99.68	102.30	22
23	82.09	84.42	86.80	89.20	91.65	94.13	96.65	99.20	101.80	104.42	23
24	84.09	86.44	88.83	91.26	93.72	96.22	98.76	101.33	103.94	106.59	24
25	86.13	88.50	90.91	93.35	95.83	98.35	100.91	103.50	106.13	108.80	25
26	88.20	90.59	93.02	95.48	97.98	100.52	103.09	105.70	108.35	111.04	26
27	90.31	92.72	95.17	97.65	100.17	102.72	105.31	107.94	110.61	113.31	27
28	92.46	94.89	97.35	99.85	102.39	104.96	107.57	110.22	112.91	115.63	28
29	94.65	97.09	99.57	102.09	104.65	107.24	109.87	112.54	115.24	117.98	29
30	96.87	99.33	101.83	104.37	106.94	109.55	112.20	114.89	117.61	120.37	30
31	99.13	101.61	104.13	106.68	109.28	111.91	114.57	117.28	120.02	122.80	31
32	101.42	103.92	106.46	109.04	111.65	114.30	116.98	119.70	122.46	125.26	32
33	103.76	106.28	108.83	111.42	114.05	116.72	119.42	122.17	124.94	127.76	33
34	106.13	108.67	111.24	113.85	116.50	119.18	121.91	124.67	127.46	130.30	34
35	108.54	111.09	113.68	116.31	118.98	121.68	124.42	127.20	130.02	132.87	35
36	110.98	113.55	116.17	118.81	121.50	124.22	126.98	129.78	132.61	135.48	36
37	113.46	116.05	118.68	121.35	124.05	126.80	129.57	132.39	135.24	138.13	37
38	115.98	118.59	121.24	123.92	126.65	129.41	132.20	135.04	137.91	140.81	38
39	118.54	121.17	123.83	126.54	129.28	132.05	134.87	137.72	140.61	143.54	39
40	121.13	123.78	126.46	129.18	131.94	134.74	137.57	140.44	143.35	146.30	40
41	123.76	126.42	129.13	131.87	134.65	137.46	140.31	143.20	146.13	149.05	41
42	126.42	129.11	131.83	134.59	137.39	140.22	143.09	146.00	148.91	151.92	42
43	129.13	131.83	134.57	137.35	140.17	143.02	145.91	148.80	151.80	154.80	43
44	131.87	134.59	137.35	140.15	142.98	145.85	148.72	151.70	154.68	157.70	44
45	134.65	137.39	140.17	142.98	145.83	148.78	151.65	154.62	157.62	160.65	45
46	137.46	140.22	143.02	145.85	148.78	151.63	154.57	157.55	160.57	163.63	46
47	140.31	143.09	145.91	148.72	151.65	154.57	157.54	160.54	163.57	166.65	47
48	143.20	146.00	148.80	151.70	154.62	157.55	160.54	163.55	166.61	169.70	48
49	146.13	148.91	151.80	154.68	157.62	160.57	163.63	166.65	169.68	172.80	49
50	149.05	151.92	154.80	157.70	160.65	163.63	166.65	169.70	172.80	175.92	50
	41	42	43	44	45	46	47	48	49	50	

TABLE V.—BASE 28—SLOPES $1\frac{1}{2}$ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.54	1.11	1.72	2.37	3.05	3.78	4.54	5.33	6.17	7.04	0
1	1.09	1.68	2.31	2.98	3.68	4.42	5.20	6.02	6.87	7.76	1
2	1.68	2.30	2.94	3.63	4.35	5.11	5.91	6.74	7.61	8.52	2
3	2.31	2.94	3.61	4.31	5.05	5.83	6.65	7.50	8.39	9.31	3
4	2.98	3.63	4.31	5.04	5.80	6.59	7.42	8.30	9.20	10.15	4
5	3.68	4.35	5.05	5.80	6.57	7.39	8.24	9.13	10.05	11.02	5
6	4.42	5.11	5.83	6.59	7.39	8.22	9.09	10.00	10.94	11.92	6
7	5.20	5.91	6.65	7.42	8.24	9.09	9.98	10.91	11.87	12.87	7
8	6.02	6.74	7.50	8.30	9.13	10.00	10.91	11.85	12.83	13.85	8
9	6.87	7.61	8.39	9.20	10.05	10.94	11.87	12.83	13.83	14.87	9
10	7.75	8.52	9.31	10.15	11.02	11.92	12.87	13.85	14.87	15.92	10
11	8.68	9.46	10.28	11.13	12.02	12.94	13.91	14.91	15.94	17.02	11
12	9.65	10.44	11.28	12.15	13.05	14.00	14.98	16.00	17.05	18.15	12
13	10.65	11.46	12.31	13.20	14.30	15.09	16.09	17.13	18.20	19.31	13
14	11.68	12.52	13.39	14.30	15.24	16.22	17.24	18.30	19.39	20.52	14
15	12.76	13.61	14.50	15.42	16.39	17.39	18.42	19.50	20.61	21.76	15
16	13.87	14.74	15.65	16.59	17.57	18.57	19.65	20.74	21.87	23.04	16
17	15.02	15.91	16.83	17.80	18.80	19.83	20.91	22.02	23.17	24.35	17
18	16.20	17.11	18.05	19.04	20.05	21.11	22.20	23.33	24.50	25.70	18
19	17.42	18.35	19.31	20.31	21.35	22.42	23.54	24.68	25.87	27.09	19
20	18.68	19.63	20.61	21.63	22.68	23.78	24.91	26.07	27.28	28.52	20
21	19.98	20.94	21.94	22.98	24.05	25.17	26.31	27.50	28.72	29.98	21
22	21.31	22.30	23.31	24.37	25.46	26.59	27.76	28.96	30.20	31.48	22
23	22.68	23.68	24.72	25.80	26.91	28.05	29.24	30.46	31.72	33.02	23
24	24.09	25.11	26.17	27.26	28.39	29.55	30.76	32.00	33.28	34.59	24
25	25.54	26.57	27.65	28.76	29.91	31.09	32.31	33.57	34.87	36.20	25
26	27.02	28.07	29.17	30.30	31.46	32.67	33.91	35.18	36.50	37.85	26
27	28.54	29.61	30.72	31.87	33.05	34.28	35.54	36.83	38.17	39.54	27
28	30.09	31.18	32.31	33.48	34.68	35.92	37.20	38.52	39.87	41.26	28
29	31.68	32.80	33.94	35.13	36.35	37.61	38.91	40.24	41.61	43.02	29
30	33.31	34.44	35.61	36.81	38.05	39.33	40.65	42.00	43.39	44.81	30
31	34.98	36.13	37.31	38.54	39.80	41.09	42.42	43.80	45.20	46.65	31
32	36.68	37.85	39.05	40.30	41.57	42.89	44.24	45.63	47.05	48.52	32
33	38.42	39.61	40.83	42.09	43.39	44.72	46.09	47.50	48.94	50.42	33
34	40.20	41.41	42.85	43.92	45.24	46.59	47.98	49.41	50.87	52.37	34
35	42.02	43.24	44.50	45.80	47.13	48.50	49.91	51.35	52.83	54.35	35
36	43.87	45.11	46.39	47.70	49.05	50.44	51.87	53.33	54.83	56.37	36
37	45.76	47.02	48.31	49.65	51.02	52.42	53.87	55.35	56.87	58.42	37
38	47.68	48.96	50.28	51.63	53.02	54.44	55.91	57.41	58.94	60.52	38
39	49.16	50.94	52.28	53.65	55.05	56.50	57.98	59.50	61.05	62.65	39
40	51.65	52.96	54.31	55.70	57.13	58.59	60.09	61.63	63.20	64.81	40
41	53.68	55.02	56.39	57.80	59.24	60.72	62.24	63.80	65.39	67.02	41
42	55.76	57.11	58.50	59.92	61.39	62.89	64.42	66.00	67.61	69.26	42
43	57.87	59.24	60.65	62.09	63.57	65.09	66.65	68.24	69.87	71.54	43
44	60.02	61.41	62.83	64.30	65.80	67.33	68.91	70.52	72.17	73.85	44
45	62.20	63.61	65.05	66.54	68.05	69.61	71.20	72.83	74.50	76.20	45
46	64.42	65.85	67.31	68.81	70.35	71.92	73.54	75.18	76.87	78.59	46
47	66.68	68.13	69.61	71.13	72.68	74.28	75.91	77.57	79.28	81.02	47
48	68.98	70.44	71.94	73.48	75.05	76.67	78.31	80.00	81.72	83.48	48
49	71.31	72.80	74.31	75.87	77.46	79.09	80.76	82.46	84.20	85.98	49
50	73.68	75.18	76.72	78.30	79.91	81.55	83.24	84.96	86.72	88.52	50
	1	2	3	4	5	6	7	8	9	10	

TABLE V.—BASE 28—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	7.94	8.89	9.87	10.89	11.94	13.04	14.17	15.33	16.54	17.78	0
1	8.68	9.65	10.65	11.68	12.76	13.87	15.02	16.20	17.42	18.68	1
2	9.46	10.44	11.46	12.52	13.61	14.74	15.91	17.11	18.35	19.63	2
3	10.28	11.28	12.31	13.39	14.50	15.65	16.83	18.05	19.31	20.61	3
4	11.13	12.15	13.20	14.30	15.42	16.59	17.80	19.04	20.31	21.63	4
5	12.02	13.05	14.13	15.24	16.39	17.57	18.80	20.05	21.35	22.68	5
6	12.94	14.00	15.09	16.22	17.39	18.59	19.83	21.11	22.42	23.78	6
7	13.91	14.98	16.09	17.24	18.42	19.65	20.91	22.20	23.54	24.91	7
8	14.91	16.00	17.13	18.30	19.50	20.74	22.02	23.33	24.68	26.07	8
9	15.94	17.05	18.20	19.39	20.61	21.87	23.17	24.50	25.87	27.28	9
10	17.02	18.15	19.31	20.52	21.76	23.04	24.35	25.70	27.09	28.52	10
11	18.13	19.28	20.46	21.68	22.94	24.24	25.57	26.94	28.35	29.80	11
12	19.28	20.44	21.65	22.89	24.17	25.48	26.83	28.22	29.65	31.11	12
13	20.46	21.65	22.87	24.13	25.42	26.76	28.13	29.54	30.98	32.46	13
14	21.68	22.89	24.13	25.41	26.72	28.07	29.46	30.89	32.35	33.85	14
15	22.94	24.17	25.42	26.72	28.05	29.42	30.83	32.28	33.76	35.28	15
16	24.24	25.48	26.76	28.07	29.42	30.81	32.24	33.70	35.20	36.74	16
17	25.57	26.83	28.13	29.46	30.83	32.24	33.68	35.17	36.68	38.24	17
18	26.94	28.22	29.54	30.89	32.28	33.70	35.17	36.67	38.20	39.78	18
19	28.35	29.65	30.98	32.35	33.76	35.20	36.68	38.20	39.76	41.35	19
20	29.80	31.11	32.46	33.85	35.28	36.74	38.24	39.78	41.35	42.96	20
21	31.28	32.61	33.98	35.39	36.83	38.31	39.83	41.39	42.98	44.61	21
22	32.80	34.15	35.54	36.96	38.42	39.92	41.46	43.04	44.65	46.30	22
23	34.35	35.72	37.13	38.57	40.05	41.57	43.13	44.72	46.35	48.02	23
24	35.94	37.33	38.76	40.22	41.72	43.26	44.83	46.44	48.09	49.78	24
25	37.57	38.98	40.42	41.91	43.42	44.98	46.57	48.20	49.87	51.57	25
26	39.24	40.67	42.13	43.63	45.17	46.74	48.35	50.00	51.68	53.41	26
27	40.94	42.39	43.87	45.39	46.94	48.54	50.17	51.83	53.54	55.28	27
28	42.68	44.15	45.65	47.18	48.76	50.37	52.02	53.70	55.42	57.18	28
29	44.46	45.94	47.46	49.02	50.61	52.24	53.91	55.61	57.35	59.13	29
30	46.28	47.78	49.31	50.89	52.50	54.15	55.83	57.55	59.31	61.11	30
31	48.13	49.65	51.20	52.80	54.42	56.09	57.80	59.54	61.31	63.13	31
32	50.02	51.55	53.13	54.74	56.39	58.07	59.80	61.55	63.35	65.18	32
33	51.94	53.50	55.09	56.72	58.39	60.09	61.83	63.61	65.42	67.28	33
34	53.91	55.48	57.09	58.74	60.42	62.15	63.91	65.70	67.54	69.41	34
35	55.91	57.50	59.13	60.80	62.50	64.24	66.02	67.83	69.68	71.57	35
36	57.94	59.55	61.20	62.89	64.61	66.37	68.17	70.00	71.87	73.78	36
37	60.02	61.65	63.31	65.02	66.76	68.54	70.35	72.20	74.09	76.02	37
38	62.13	63.78	65.46	67.18	68.94	70.74	72.57	74.44	76.35	78.30	38
39	64.28	65.94	67.65	69.39	71.17	72.98	74.83	76.72	78.65	80.61	39
40	66.46	68.15	69.87	71.63	73.42	75.26	77.13	79.04	80.98	82.96	40
41	68.68	70.39	72.13	73.91	75.72	77.57	79.46	81.39	83.35	85.35	41
42	70.94	72.67	74.42	76.22	78.05	79.92	81.83	83.78	85.76	87.78	42
43	73.24	74.98	76.76	78.57	80.42	82.31	84.24	86.20	88.20	90.24	43
44	75.57	77.33	79.13	80.96	82.83	84.74	86.68	88.67	90.68	92.74	44
45	77.94	79.72	81.54	83.39	85.28	87.20	89.17	91.17	93.20	95.28	45
46	80.35	82.15	83.98	85.85	87.76	89.70	91.68	93.70	95.76	97.85	46
47	82.80	84.61	86.46	88.35	90.28	92.24	94.24	96.28	98.35	100.46	47
48	85.28	87.11	88.98	90.89	92.83	94.81	96.83	98.89	100.98	103.11	48
49	87.80	89.65	91.54	93.46	95.42	97.42	99.46	101.54	103.65	105.80	49
50	90.35	92.22	94.13	96.07	98.05	100.07	102.13	104.22	106.35	108.52	50
	11	12	13	14	15	16	17	18	19	20	

TABLE V.—BASE 28—SLOPES $1\frac{1}{2}$ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	19.05	20.37	21.72	23.11	24.54	26.00	27.50	29.04	30.61	32.22	0
1	19.98	21.31	22.68	24.09	25.54	27.02	28.54	30.09	31.68	33.31	1
2	20.94	22.30	23.68	25.11	26.57	28.07	29.61	31.18	32.80	34.44	2
3	21.94	23.31	24.72	26.17	27.65	29.17	30.72	32.31	33.94	35.61	3
4	22.98	24.37	25.80	27.26	28.76	30.30	31.87	33.48	35.13	36.81	4
5	24.05	25.46	26.91	28.39	29.91	31.46	33.05	34.68	36.35	38.05	5
6	25.17	26.59	28.05	29.55	31.09	32.67	34.28	35.92	37.61	39.33	6
7	26.31	27.76	29.24	30.76	32.31	33.91	35.54	37.20	38.91	40.65	7
8	27.50	28.96	30.46	32.00	33.57	35.18	36.83	38.52	40.24	42.00	8
9	28.72	30.20	31.72	33.28	34.87	36.50	38.17	39.87	41.61	43.39	9
10	29.98	31.48	33.02	34.59	36.20	37.85	39.54	41.26	43.02	44.81	10
11	31.28	32.80	34.35	35.94	37.57	39.24	40.94	42.68	44.46	46.28	11
12	32.61	34.15	35.72	37.33	38.98	40.67	42.39	44.15	45.94	47.78	12
13	33.98	35.54	37.13	38.76	40.42	42.13	43.87	45.65	47.46	49.31	13
14	35.39	36.96	38.57	40.22	41.91	43.63	45.39	47.18	49.02	50.89	14
15	36.83	38.42	40.05	41.72	43.42	45.17	46.94	48.76	50.61	52.50	15
16	38.31	39.92	41.57	43.26	44.98	46.74	48.54	50.37	52.24	54.15	16
17	39.83	41.46	43.13	44.83	46.57	48.35	50.17	52.02	53.91	55.83	17
18	41.39	43.04	44.72	46.44	48.20	50.00	51.83	53.70	55.61	57.55	18
19	42.98	44.65	46.35	48.09	49.87	51.68	53.54	55.42	57.35	59.31	19
20	44.61	46.30	48.02	49.78	51.57	53.41	55.28	57.18	59.13	61.11	20
21	46.28	47.98	49.72	51.50	53.31	55.17	57.05	58.98	60.94	62.94	21
22	47.98	49.70	51.46	53.26	55.09	56.96	58.87	60.81	62.80	64.81	22
23	49.72	51.46	53.24	55.05	56.91	58.80	60.72	62.68	64.68	66.72	23
24	51.50	53.26	55.05	56.89	58.76	60.67	62.61	64.59	66.61	68.67	24
25	53.31	55.09	56.91	58.76	60.65	62.57	64.54	66.54	68.57	70.65	25
26	55.17	56.96	58.80	60.67	62.57	64.52	66.50	68.52	70.57	72.67	26
27	57.05	58.87	60.72	62.61	64.54	66.50	68.50	70.54	72.61	74.72	27
28	58.98	60.81	62.68	64.59	66.54	68.52	70.54	72.59	74.68	76.81	28
29	60.94	62.80	64.68	66.61	68.57	70.57	72.61	74.68	76.80	78.94	29
30	62.94	64.81	66.72	68.67	70.65	72.67	74.72	76.81	78.94	81.11	30
31	64.98	66.87	68.80	70.76	72.76	74.80	76.87	78.98	81.13	83.31	31
32	67.05	68.96	70.91	72.89	74.91	76.96	79.05	81.18	83.35	85.55	32
33	69.17	71.09	73.05	75.05	77.09	79.17	81.28	83.42	85.61	87.83	33
34	71.31	73 26	75.24	77.26	79.31	81.41	83.54	85.70	87.91	90.15	34
35	73.50	75.46	77.46	79.50	81.57	83.68	85.83	88.02	90.24	92.50	35
36	75.72	77.70	79.72	81.78	83.87	86.00	88.17	90.37	92.61	94.89	36
37	77.98	79.98	82.02	84.09	86.20	88.35	90.54	92.76	95.02	97.31	37
38	80.28	82.30	84.35	86.44	88.57	90.74	92.94	95.18	97.46	99.78	38
39	82.61	84.65	86.72	88.83	90.98	93.17	95.39	97.65	99.94	102.28	39
40	84.98	87.04	89.13	91.26	93.42	95.63	97.87	100.15	102.46	104.81	40
41	87.39	89.46	91.57	93.72	95.91	98.13	100.39	102.68	105.02	107.39	41
42	89.83	91.92	94.05	96.22	98.42	100.67	102.94	105.26	107.61	110.00	42
43	92.31	94.42	96.57	98.76	100.98	103.24	105.54	107.87	110.24	112.65	43
44	94.83	96.96	99.13	101.33	103.57	105.85	108.17	110.52	112.91	115.33	44
45	97.39	99.54	101.72	103.94	106.20	108.50	110.83	113.20	115.61	118.05	45
46	99.98	102.15	104.35	106.59	108.87	111.18	113.54	115.92	118.35	120.81	46
47	102.61	104.80	107.02	109.28	111.57	113.91	116.28	118.68	121.13	123.61	47
48	105.28	107.48	109.72	112.00	114.31	116.67	119.05	121.48	123.94	126.44	48
49	107.98	110.20	112.46	114.76	117.09	119.46	121.87	124.31	126.80	129.31	49
50	110.72	112.96	115.24	117.55	119.91	122.30	124.72	127.18	129.68	132.22	50
	21	22	23	24	25	26	27	28	29	30	

TABLE V.—BASE 28—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	3 8	39	40	Feet.
0	33.87	35.55	37.28	39.04	40.83	42.67	44.54	46.44	48.39	50.37	0
1	34.98	36.68	38.42	40.20	42.02	43.87	45.76	47.68	49.16	51.65	1
2	36.13	37.85	39.61	41.41	43.24	45.11	47.02	48.96	50.94	52.96	2
3	37.31	39.05	40.83	42.85	44.50	46.39	48.31	50.28	52.28	54.31	3
4	38.54	40.30	42.09	43.92	45.80	47.70	49.65	51.65	53.65	55.70	4
5	39.80	41.57	43.39	45.24	47.13	49.05	51.02	53.02	55.05	57.13	5
6	41.09	42.89	44.72	46.59	48.50	50.44	52.42	54.44	56.50	58.59	6
7	42.42	44.24	46.09	47.98	49.91	51.87	53.87	55.91	57.98	60.09	7
8	43.80	45.63	47.50	49.41	51.35	53.33	55.35	57.41	59.50	61.63	8
9	45.20	47.05	48.94	50.87	52.83	54.83	56.87	58.94	61.05	63.20	9
10	46.65	48.52	50.42	52.37	54.35	56.37	58.42	60.52	62.65	64.81	10
11	48.13	50.02	51.94	53.91	55.91	57.94	60.02	62.13	64.28	66.46	11
12	49.65	51.55	53.50	55.48	57.50	59.55	61.65	63.78	65.94	68.15	12
13	51.20	53.13	55.09	57.09	59.13	61.20	63.31	65.46	67.65	69.87	13
14	52.80	54.74	56.72	58.74	60.80	62.89	65.02	67.18	69.39	71.63	14
15	54.42	56.39	58.39	60.42	62.50	64.61	66.76	68.94	71.17	73.42	15
16	56.09	58.07	60.09	62.15	64.24	66.37	68.54	70.74	72.98	75.26	16
17	57.80	59.80	61.83	63.91	66.02	68.17	70.35	72.57	74.83	77.13	17
18	59.54	61.55	63.61	65.70	67.83	70.00	72.20	74.44	76.72	79.04	18
19	61.31	63.35	65.42	67.54	69.68	71.87	74.09	76.35	78.65	80.98	19
20	63.13	65.18	67.28	69.41	71.57	73.78	76.02	78.30	80.61	82.96	20
21	64.98	67.05	69.17	71.31	73.50	75.72	77.98	80.28	82.61	84.98	21
22	66.87	68.96	71.09	73.26	75.46	77.70	79.98	82.30	84.65	87.04	22
23	68.80	70.91	73.05	75.24	77.46	79.72	82.02	84.35	86.72	89.13	23
24	70.76	72.89	75.05	77.26	79.50	81.78	84.09	86.44	88.83	91.26	24
25	72.76	74.91	77.09	79.31	81.57	83.87	86.20	88.57	90.98	93.42	25
26	74.80	76.96	79.17	81.41	83.68	86.00	88.35	90.74	93.17	95.63	26
27	76.87	79.05	81.28	83.54	85.83	88.17	90.54	92.94	95.39	97.87	27
28	78.98	81.18	83.42	85.70	88.02	90.37	92.76	95.18	97.65	100.15	28
29	81.13	83.35	85.61	87.91	90.94	92.61	95.02	97.46	99.94	102.46	29
30	83.31	85.55	87.83	90.15	92.50	94.89	97.31	99.78	102.28	104.81	30
31	85.54	87.80	90.09	92.42	94.80	97.20	99.65	102.13	104.65	107.20	31
32	87.80	90.07	92.39	94.74	97.13	99.55	102.02	104.52	107.05	109.63	32
33	90.09	92.39	94.72	97.09	99.50	101.94	104.42	106.94	109.50	112.09	33
34	92.42	94.74	97.09	99.48	101.91	104.37	106.87	109.41	111.98	114.59	34
35	94.80	97.13	99.50	101.91	104.35	106.83	109.35	111.91	114.50	117.13	35
36	97.20	99.55	101.94	104.37	106.83	109.33	111.87	114.44	117.05	119.70	36
37	99.65	102.02	104.42	106.87	109.35	111.87	114.42	117.02	119.65	122.31	37
38	102.13	104.52	106.94	109.41	111.91	114.44	117.02	119.63	122.28	124.96	38
39	104.65	107.05	109.50	111.98	114.50	117.05	119.65	122.28	124.94	127.65	39
40	107.20	109.63	112.09	114.59	117.13	119.70	122.31	124.96	127.65	130.37	40
41	109.80	112.24	114.72	117.24	119.80	122.39	125.02	127.68	130.39	133.13	41
42	112.42	114.89	117.39	119.92	122.50	125.11	127.76	130.44	133.17	135.92	42
43	115.09	117.57	120.09	122.65	125.24	127.87	130.54	133.24	135.98	138.76	43
44	117.80	120.30	122.83	125.41	128.02	130.67	133.35	136.07	138.83	141.63	44
45	120.54	123.05	125.61	128.20	130.83	133.50	136.20	138.94	141.72	144.54	45
46	123.31	125.85	128.42	131.04	133.68	136.37	139.09	141.85	144.65	147.48	46
47	126.13	128.68	131.28	133.91	136.57	139.28	142.02	144.80	147.61	150.46	47
48	128.98	131.55	134.17	136.81	139.50	142.22	144.98	147.78	150.61	153.48	48
49	131.87	134.46	137.09	139.76	142.46	145.20	147.98	150.80	153.65	156.54	49
50	134.80	137.41	140.05	142.74	145.46	148.22	151.02	153.85	156.72	159.63	50
	31	32	33	34	35	36	37	38	39	40	

TABLE V.—BASE 28—SLOPES $1\frac{1}{2}$ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	52.39	54.44	56.54	58.67	60.83	63.04	65.28	67.55	69.87	72.22	0
1	53.68	55.76	57.87	60.02	62.20	64.42	66.68	68.98	71.31	73.68	1
2	55.02	57.11	59.24	61.41	63.61	65.85	68.13	70.44	72.80	75.18	2
3	56.39	58.50	60.65	62.83	65.05	67.31	69.61	71.94	74.31	76.72	3
4	57.80	59.92	62.09	64.30	66.54	68.81	71.13	73.48	75.87	78.30	4
5	59.24	61.39	63.57	65.80	68.05	70.35	72.68	75.05	77.46	79.91	5
6	60.72	62.89	65:09	67.33	69.61	71.92	74.28	76.67	79.09	81.55	6
7	62.24	64.42	66.65	68.91	71.20	73.54	75.91	78.31	80.76	83.24	7
8	63.80	66.00	68.24	70.52	72.83	75.18	77.57	80.00	82.46	84.96	8
9	65.39	67.61	69.87	72.17	74.50	76.87	79.28	81.72	84.20	86.72	9
10	67.02	69.26	71.54	73.85	76.20	78.59	81.02	83.48	85.98	88.52	10
11	68.68	70.94	73.24	75.57	77.94	80.35	82.80	85.28	87.80	90.35	11
12	70.39	72.67	74.98	77.33	79.72	82.15	84.61	87.11	89.65	92.22	12
13	72.13	74.42	76.76	79.13	81.54	83.98	86.46	88.98	91.54	94.13	13
14	73.91	76.22	78.57	80.96	83.39	85.85	88.35	90.89	93.46	96.07	14
15	75.72	78.05	80.42	82.83	85.28	87.76	90.28	92.83	95.42	98.05	15
16	77.57	79.92	82.31	84.74	87.20	89.70	92.24	94.81	97.42	100.07	16
17	79.46	81.83	84.24	86.68	89.17	91.68	94.24	96.83	99.46	102.13	17
18	81.39	83.78	86.20	88.67	91.17	93.70	96.28	98.89	101.54	104.22	18
19	83.35	85.76	88.20	90.68	93.20	95.76	98.35	100.98	103.65	106.35	19
20	85.35	87.78	90.24	92.74	95.28	97.85	100.46	103.11	105.80	108.52	20
21	87.39	89.83	92.31	94.83	97.39	99.98	102.61	105.28	107.98	110.72	21
22	89.46	91.92	94.42	96.96	99.54	102.15	104.80	107.48	110.20	112.96	22
23	91.57	94.05	96.57	99.13	101.72	104.35	107.02	109.72	112.46	115.24	23
24	93.72	96.22	98.76	101.33	103.94	106.59	109.28	112.00	114.76	117.55	24
25	95.91	98.42	100.98	103.57	106.20	108.87	111.57	114.31	117.09	119.91	25
26	98.13	100.67	103.24	105.85	108.50	111.18	113.91	116.67	119.46	122.30	26
27	100.39	102.94	105.54	108.17	110.83	113.54	116.28	119.05	121.87	124.72	27
28	102.68	105.26	107.87	110.52	113.20	115.92	118.68	121.48	124.31	127.18	28
29	105.02	107.61	110.24	112.91	115.61	118.35	121.13	123.94	126.80	129.68	29
30	107.39	110.00	112.65	115.33	118.05	120.81	123.61	126.44	129.31	132.22	30
31	109.80	112.42	115.09	117.80	120.54	123.31	126.13	128.98	131.87	134.80	31
32	112.24	114.89	117.57	120.30	123.05	125.85	128.68	131.55	134.46	137.41	32
33	114.72	117.39	120.09	122.83	125.61	128.42	131.28	134.17	137.09	140.05	33
34	117.24	119.92	122.65	125.41	128.20	131.04	133.91	135.81	139.76	142.74	34
35	119.80	122.50	125.24	128.02	130.85	133.68	136.57	139.50	142.46	145.46	35
36	122.39	125.11	127.87	130.67	133.50	136.37	139.28	142.22	145.20	148.22	36
37	125.02	127.76	130.54	133.35	136.20	139.09	142.02	144.98	147.98	151.02	37
38	127.68	130.44	133.24	136.07	138.94	141.85	144.80	147.78	150.80	153.85	38
39	130.39	133.17	135.98	138.83	141.72	144.65	147.61	150.61	153.65	156.72	39
40	133.13	135.92	138.76	141.63	144.54	147.48	150.46	153.48	156.54	159.63	40
41	135.91	138.72	141.57	144.46	147.39	150.35	153.35	156.39	159.46	162.57	41
42	138.72	141.55	144.42	147.33	150.28	153.26	156.28	159.33	162.42	165.55	42
43	141.57	144.42	147.31	150.24	153.20	156.20	159.24	162.31	165.42	168.57	43
44	144.46	147.33	150.24	153.18	156.17	159.18	162.24	165.33	168.46	171.63	44
45	147.39	150.28	153.20	156.17	159.17	162.20	165.28	168.39	171.54	174.72	45
46	150.35	153.26	156.20	159.18	162.20	165.26	168.35	171.48	174.65	177.85	46
47	153.35	156.28	159.24	162.24	165.28	168.35	171.46	174.61	177.80	181.02	47
48	156.39	159.33	162.31	165.33	168.39	171.48	174.61	177.78	180.98	184.22	48
49	159.46	162.42	165.42	168.46	171.54	174.65	177.80	180.98	184.20	187.46	49
50	162.57	165.55	168.57	171.63	174.72	177.85	181.02	184.22	187.46	190.74	50
	41	42	43	44	45	46	47	48	49	50	

TABLE VI.—BASE 30—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.57	1.19	1.83	2.52	3.24	4.00	4.80	5.63	6.49	7.41	0
1	1.17	1.80	2.46	3.17	3.91	4.69	5.50	6.35	7.24	8.17	1
2	1.80	2.44	3.13	3.85	4.61	5.41	6.24	7.11	8.02	8.96	2
3	2.46	3.13	3.83	4.57	5.35	6.17	7.02	7.91	8.83	9.80	3
4	3.17	3.85	4.57	5.33	6.13	6.96	7.83	8.74	9.69	10.67	4
5	3.91	4.61	5.35	6.13	6.94	7.80	8.69	9.61	10.57	11.57	5
6	4.69	5.41	6.17	6.96	7.80	8.67	9.57	10.52	11.50	12.52	6
7	5.50	6.24	7.02	7.83	8.69	9.57	10.50	11.46	12.46	13.50	7
8	6.35	7.11	7.91	8.74	9.61	10.52	11.46	12.44	13.46	14.52	8
9	7.24	8.02	8.83	9.69	10.57	11.50	12.46	13.46	14.50	15.57	9
10	8.17	8.96	9.80	10.67	11.57	12.52	13.50	14.52	15.57	16.67	10
11	9.13	9.94	10.80	11.69	12.61	13.57	14.57	15.61	16.69	17.80	11
12	10.13	10.96	11.83	12.74	13.69	14.67	15.69	16.74	17.83	18.96	12
13	11.17	12.02	12.91	13.83	14.80	15.80	16.83	17.91	19.02	20.17	13
14	12.24	13.11	14.02	14.96	15.94	16.96	18.02	19.11	20.24	21.41	14
15	13.35	14.24	15.17	16.13	17.13	18.17	19.24	20.35	21.50	22.69	15
16	14.50	15.41	16.35	17.33	18.35	19.41	20.50	21.63	22.80	24.00	16
17	15.69	16.61	17.57	18.57	19.61	20.69	21.80	22.94	24.13	25.35	17
18	16.91	17.85	18.83	19.85	20.91	22.00	23.13	24.30	25.50	26.74	18
19	18.17	19.13	20.13	21.17	22.24	23.35	24.50	25.69	26.91	28.17	19
20	19.46	20.44	21.46	22.52	23.61	24.74	25.91	27.11	28.35	29.63	20
21	20.80	21.80	22.83	23.91	25.02	26.17	27.35	28.57	29.83	31.13	21
22	22.17	23.19	24.24	25.33	26.46	27.63	28.83	30.07	31.35	32.67	22
23	23.57	24.61	25.69	26.80	27.94	29.13	30.35	31.61	32.91	34.24	23
24	25.02	26.07	27.17	28.30	29.46	30.67	31.91	33.19	34.50	35.85	24
25	26.50	27.57	28.69	29.83	31.02	32.24	33.50	34.80	36.13	37.50	25
26	28.02	29.11	30.24	31.41	32.61	33.85	35.13	36.44	37.80	39.19	26
27	29.57	30.69	31.83	33.02	34.24	35.50	36.80	38.13	39.50	40.91	27
28	31.17	32.30	33.46	34.67	35.91	37.19	38.50	39.85	41.24	42.67	28
29	32.80	33.94	35.13	36.35	37.61	38.91	40.24	41.61	43.02	44.46	29
30	34.46	35.63	36.83	38.07	39.35	40.67	42.02	43.41	44.83	46.29	30
31	36.17	37.35	38.57	39.83	41.13	42.46	43.83	45.24	46.69	48.17	31
32	37.91	39.11	40.35	41.63	42.94	44.30	45.69	47.11	48.57	50.07	32
33	39.69	40.91	42.17	43.46	44.80	46.17	47.57	49.02	50.50	52.02	33
34	41.50	42.74	44.02	45.33	46.69	48.07	49.50	50.96	52.46	54.00	34
35	43.35	44.61	45.91	47.24	48.61	50.02	51.46	52.94	54.46	56.02	35
36	45.24	46.52	47.83	49.19	50.57	52.00	53.46	54.96	56.50	58.07	36
37	47.17	48.46	49.80	51.17	52.57	54.02	55.50	57.02	58.57	60.17	37
38	49.13	50.44	51.80	53.19	54.61	56.07	57.57	59.11	60.69	62.30	38
39	51.13	52.46	53.83	55.24	56.69	58.17	59.69	61.24	62.83	64.46	39
40	53.17	54.52	55.91	57.35	58.80	60.30	61.83	63.41	65.02	66.67	40
41	55.24	56.61	58.02	59.46	60.94	62.46	64.02	65.61	67.24	68.91	41
42	57.35	58.74	60.17	61.63	63.13	64.67	66.24	67.85	69.50	71.19	42
43	59.50	60.91	62.35	63.83	65.35	66.91	68.50	70.13	71.80	73.50	43
44	61.69	63.11	64.57	66.07	67.61	69.19	70.80	72.44	74.13	75.85	44
45	63.91	65.35	66.83	68.35	69.91	71.50	73.13	74.80	76.50	78.24	45
46	66.17	67.63	69.13	70.67	72.24	73.85	75.50	77.19	78.91	80.67	46
47	68.46	69.94	71.46	73.02	74.61	76.24	77.91	79.61	81.35	83.13	47
48	70.80	72.30	73.83	75.41	77.02	78.67	80.35	82.07	83.83	85.63	48
49	73.17	74.69	76.24	77.83	79.46	81.13	82.83	84.57	86.35	88.17	49
50	75.57	77.11	78.69	80.30	81.94	83.63	85.35	87.11	88.91	90.74	50
	1	2	3	4	5	6	7	8	9	10	

TABLE VI.—BASE 30—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	8.35	9.33	10.35	11.41	12.50	13.63	14.80	16.00	17.24	18.52	0
1	9.13	10.13	11.17	12.24	13.35	14.50	15.69	16.91	18.17	19.46	1
2	9.94	10.96	12.02	13.11	14.24	15.41	16.61	17.85	19.13	20.44	2
3	10.80	11.83	12.91	14.02	15.17	16.35	17.57	18.83	20.13	21.46	3
4	11.69	12.74	13.83	14.96	16.13	17.33	18.57	19.85	21.17	22.52	4
5	12.61	13.69	14.80	15.94	17.13	18.35	19.61	20.91	22.24	23.61	5
6	13.57	14.67	15.80	16.96	18.17	19.41	20.69	22.00	23.35	24.74	6
7	14.57	15.69	16.83	18.02	19.24	20.50	21.80	23.13	24.50	25.91	7
8	15.61	16.74	17.91	19.11	20.35	21.63	22.94	24.30	25.69	27.11	8
9	16.69	17.83	19.02	20.24	21.50	22.80	24.13	25.50	26.91	28.35	9
10	17.80	18.96	20.17	21.41	22.69	24.00	25.35	26.74	28.17	29.63	10
11	18.94	20.13	21.35	22.61	23.91	25.24	26.61	28.02	29.46	30.94	11
12	20.13	21.33	22.57	23.85	25.17	26.52	27.91	29.33	30.80	32.30	12
13	21.35	22.57	23.83	25.13	26.46	27.85	29.24	30.69	32.17	33.69	13
14	22.61	23.85	25.13	26.44	27.80	29.19	30.61	32.07	33.57	35.11	14
15	23.91	25.17	26.46	27.80	29.17	30.57	32.02	33.50	35.02	36.57	15
16	25.24	26.52	27.83	29.19	30.57	32.00	33.46	34.96	36.50	38.07	16
17	26.61	27.91	29.24	30.61	32.02	33.46	34.94	36.46	38.02	39.61	17
18	28.02	29.33	30.69	32.07	33.50	34.96	36.46	38.00	39.57	41.19	18
19	29.46	30.80	32.17	33.57	35.02	36.50	38.02	39.57	41.17	42.80	19
20	30.94	32.30	33.69	35.11	36.57	38.07	39.61	41.19	42.80	44.44	20
21	32.46	33.83	35.24	36.69	38.17	39.69	41.24	42.83	44.46	46.13	21
22	34.02	35.41	36.83	38.30	39.80	41.33	42.91	44.52	46.17	47.85	22
23	35.61	37.02	38.46	39.94	41.46	43.02	44.61	46.24	47.91	49.61	23
24	37.24	38.67	40.13	41.63	43.17	44.74	46.35	48.00	49.69	51.41	24
25	38.91	40.35	41.83	43.35	44.91	46.50	48.13	49.80	51.50	53.24	25
26	40.61	42.07	43.57	45.11	46.69	48.30	49.94	51.63	53.35	55.11	26
27	42.35	43.83	45.35	46.91	48.50	50.13	51.80	53.50	55.24	57.02	27
28	44.13	45.63	47.17	48.74	50.35	52.00	53.69	55.41	57.17	58.96	28
29	45.94	47.46	49.02	50.61	52.24	53.91	55.61	57.35	59.13	60.94	29
30	47.80	49.33	50.91	52.52	54.17	55.85	57.57	59.33	61.13	62.96	30
31	49.69	51.24	52.83	54.46	56.13	57.85	59.57	61.35	63.17	65.02	31
32	51.61	53.19	54.80	56.44	58.13	59.85	61.61	63.41	65.24	67.11	32
33	53.57	55.17	56.80	58.46	60.17	61.91	63.69	65.50	67.35	69.24	33
34	55.57	57.19	58.83	60.52	62.24	64.00	65.80	67.63	69.50	71.41	34
35	57.61	59.24	60.91	62.61	64.35	66.13	67.94	69.80	71.68	73.61	35
36	59.69	61.33	63.02	64.74	66.50	68.30	70.13	72.00	73.91	75.85	36
37	61.80	63.46	65.17	66.91	68.69	70.50	72.35	74.24	76.17	78.13	37
38	63.94	65.63	67.35	69.11	70.91	72.74	74.61	76.52	78.46	80.44	38
39	66.13	67.83	69.57	71.35	73.17	75.02	76.91	78.83	80.80	82.80	39
40	68.35	70.07	71.83	73.63	75.46	77.33	79.24	81.17	83.17	85.19	40
41	70.61	72.35	74.13	75.94	77.80	79.69	81.61	83.57	85.57	87.61	41
42	72.91	74.67	76.46	78.30	80.17	82.07	84.02	86.00	88.02	90.07	42
43	75.24	77.02	78.83	80.69	82.57	84.50	86.46	88.46	90.50	92.57	43
44	77.61	79.41	81.24	83.11	85.02	86.96	88.94	90.96	93.02	95.11	44
45	80.02	81.83	83.69	85.57	87.50	89.46	91.46	93.50	95.57	97.69	45
46	82.46	84.30	86.17	88.07	90.19	92.00	94.02	96.07	98.17	100.30	46
47	84.94	86.80	88.69	90.61	92.57	94.57	96.61	98.69	100.80	102.94	47
48	87.47	89.33	91.24	93.19	95.17	97.19	99.24	101.33	103.46	105.63	48
49	90.02	91.91	93.83	95.80	97.80	99.83	101.91	104.02	106.17	108.35	49
50	92.61	94.51	96.46	98.44	100.46	102.52	104.61	106.74	108.91	111.11	50
	11	12	13	14	15	16	17	18	19	20	

TABLE VI.—BASE 30—SLOPES 1½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	19.83	21.19	22.57	24.00	25.46	26.96	28.50	30.07	31.69	33.33	0
1	20.80	22.17	25.57	25.02	26.50	28.02	29.57	31.17	32.80	34.46	1
2	21.80	23.19	24.61	26.07	27.57	29.11	30.69	32.30	33.94	35.63	2
3	22.83	24.24	25.69	27.17	28.69	30.24	31.85	33.46	35.13	36.83	3
4	23.91	25.33	26.80	28.30	29.83	31.41	33.02	34.67	36.35	38.07	4
5	25.02	26.46	27.94	29.46	31.02	32.61	34.24	35.91	37.61	39.35	5
6	26.17	27.63	29.13	30.67	32.24	33.85	35.50	37.19	38.91	40.67	6
7	27.35	28.83	30.35	31.91	33.50	35.13	36.80	38.50	40.24	42.02	7
8	28.57	30.07	31.61	33.19	34.80	36.44	38.13	39.85	41.61	43.41	8
9	29.83	31.35	32.91	34.50	36.13	37.80	39.50	41.24	43.02	44.83	9
10	31.13	32.67	34.24	35.85	37.50	39.19	40.91	42.67	44.46	46.30	10
11	32.46	34.02	35.61	37.24	38.91	40.61	42.35	44.13	45.94	47.80	11
12	33.83	35.41	37.02	38.67	40.35	42.07	43.83	45.63	47.46	49.33	12
13	35.24	36.83	38.46	40.13	41.83	43.57	45.35	47.17	49.02	50.91	13
14	36.69	38.30	39.94	41.63	43.35	45.11	46.91	48.74	50.61	52.52	14
15	38.17	39.80	41.46	43.17	44.91	46.69	48.50	50.35	52.24	54.17	15
16	39.69	41.33	43.02	44.74	46.50	48.30	50.13	52.00	53.91	55.85	16
17	41.24	42.91	44.61	46.35	48.13	49.94	51.80	53.69	55.61	57.57	17
18	42.83	44.52	46.24	48.00	49.80	51.63	53.50	55.41	57.35	59.33	18
19	44.46	46.17	47.91	49.69	51.50	53.35	55.24	57.17	59.13	61.13	19
20	46.13	47.85	49.61	51.41	53.24	55.11	57.02	58.96	60.94	62.96	20
21	47.83	49.57	51.35	53.17	55.02	56.91	58.83	60.80	62.80	64.83	21
22	49.57	51.33	53.13	54.96	56.83	58.74	60.69	62.67	64.69	66.74	22
23	51.35	53.13	54.94	56.80	58.69	60.61	62.57	64.57	66.61	68.69	23
24	53.17	54.96	56.80	58.67	60.57	62.52	64.50	66.52	68.57	70.67	24
25	55.02	56.83	58.69	60.57	62.50	64.46	66.46	68.50	70.57	72.69	25
26	56.91	58.74	60.61	62.52	64.46	66.44	68.46	70.52	72.61	74.74	26
27	58.83	60.69	62.57	64.50	66.46	68.46	70.50	72.57	74.69	76.83	27
28	60.80	62.67	64.57	66.52	68.50	70.52	72.57	74.67	76.80	78.96	28
29	62.80	64.69	66.61	68.57	70.57	72.61	74.69	76.80	78.94	81.13	29
30	64.83	66.74	68.69	70.67	72.69	74.74	76.83	78.96	81.13	83.33	30
31	66.91	68.83	70.80	72.80	74.83	76.91	79.02	81.17	83.35	85.57	31
32	69.02	70.96	72.94	74.96	77.02	79.11	81.24	83.41	85.61	87.85	32
33	71.17	73.13	75.13	77.17	79.24	81.35	83.50	85.69	87.91	90.17	33
34	73.35	75.33	77.35	79.41	81.50	83.63	85.80	88.00	90.24	92.52	34
35	75.57	77.57	79.61	81.69	83.80	85.94	88.13	90.35	92.61	94.91	35
36	77.83	79.85	81.91	84.00	86.13	88.30	90.50	92.74	95.02	97.33	36
37	80.13	82.17	84.24	86.35	88.50	90.69	92.91	95.17	97.46	99.80	37
38	82.46	84.52	86.61	88.74	90.91	93.11	95.35	97.63	99.94	102.30	38
39	84.83	86.91	89.02	91.17	93.35	95.57	97.83	100.13	102.46	104.83	39
40	87.24	89.33	91.46	93.63	95.83	98.07	100.35	102.67	105.02	107.41	40
41	89.69	91.80	93.94	96.13	98.35	100.61	102.91	105.24	107.61	110.02	41
42	92.17	94.30	96.46	98.67	100.91	103.19	105.50	107.85	110.24	112.67	42
43	94.69	96.83	99.02	101.24	103.50	105.80	108.13	110.50	112.91	115.35	43
44	97.24	99.41	101.61	103.85	106.13	108.44	110.80	113.19	115.61	118.07	44
45	99.83	102.02	104.24	106.50	108.80	111.13	113.50	115.91	118.35	120.83	45
46	102.46	104.67	106.91	109.19	111.50	113.85	116.24	118.67	121.13	123.63	46
47	105.13	107.35	109.61	111.91	114.24	116.61	119.02	121.46	123.94	126.46	47
48	107.83	110.07	112.35	114.67	117.02	119.41	121.83	124.30	126.80	129.33	48
49	110.57	112.83	115.13	117.46	119.83	122.24	124.69	127.17	129.69	132.24	49
50	113.35	115.63	117.94	120.30	122.69	125.11	127.57	130.07	132.61	135.19	50
	21	22	23	24	25	26	27	28	29	30	

TABLE VI.—BASE 30—SLOPES $1\frac{1}{2}$ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	35.02	36.74	38.50	40.30	42.14	44.00	45.91	47.85	49.83	51.85	0
1	36.17	37.91	39.69	41.50	43.35	45.24	47.17	49.13	51.13	53.17	1
2	37.35	39.11	40.91	42.74	44.61	46.52	48.46	50.44	52.46	54.52	2
3	38.57	40.35	42.17	44.02	45.91	47.83	49.80	51.80	53.83	55.91	3
4	39.83	41.63	43.46	45.33	47.24	49.19	51.17	53.19	55.24	57.33	4
5	41.13	42.94	44.80	46.69	48.61	50.57	52.57	54.61	56.69	58.80	5
6	42.46	44.30	46.17	48.07	50.02	52.00	54.02	56.07	58.17	60.30	6
7	43.83	45.69	47.57	49.50	51.46	53.46	55.50	57.57	59.69	61.83	7
8	45.24	47.11	49.02	50.96	52.94	54.96	57.02	59.11	61.24	63.41	8
9	46.69	48.57	50.50	52.46	54.46	56.50	58.57	60.69	62.83	65.02	9
10	48.17	50.07	52.02	54.00	56.02	58.07	60.17	62.30	64.46	66.67	10
11	49.69	51.61	53.57	55.57	57.61	59.69	61.80	63.94	66.13	68.35	11
12	51.24	53.19	55.17	57.19	59.24	61.33	63.46	65.63	67.83	70.07	12
13	52.83	54.80	56.80	58.83	60.91	63.02	65.17	67.35	69.57	71.83	13
14	54.46	56.44	58.46	60.52	62.61	64.74	66.91	69.11	71.35	73.63	14
15	56.13	58.13	60.17	62.24	64.35	66.50	68.69	70.91	73.17	75.46	15
16	57.83	59.85	61.91	64.00	66.13	68.30	70.50	72.74	75.02	77.33	16
17	59.57	61.61	63.69	65.80	67.94	70.13	72.35	74.61	76.91	79.24	17
18	61.35	63.41	65.50	67.63	69.80	72.00	74.24	76.52	78.83	81.17	18
19	63.17	65.24	67.35	69.50	71.68	73.91	76.17	78.46	80.80	83.17	19
20	65.02	67.11	69.24	71.41	73.61	75.85	78.13	80.44	82.80	85.19	20
21	66.91	69.02	71.17	73.35	75.57	77.83	80.13	82.46	84.83	87.24	21
22	68.83	70.96	73.13	75.33	77.57	79.85	82.17	84.52	86.91	89.33	22
23	70.80	72.94	75.13	77.35	79.61	81.91	84.24	86.61	89.02	91.46	23
24	72.80	74.96	77.17	79.41	81.69	84.00	86.35	88.74	91.17	93.63	24
25	74.83	77.02	79.24	81.50	83.80	86.13	88.50	90.91	93.35	95.83	25
26	76.91	79.11	81.35	83.63	85.94	88.30	90.69	93.11	95.57	98.07	26
27	79.02	81.24	83.50	85.80	88.13	90.50	92.91	95.35	97.83	100.35	27
28	81.17	83.41	85.69	88.00	90.35	92.74	95.17	97.63	100.13	102.67	28
29	83.35	85.61	87.91	90.24	92.61	95.02	97.46	99.94	102.46	105.02	29
30	85.57	87.85	90.17	92.52	94.91	97.33	99.80	102.30	104.83	107 41	30
31	87.83	90.13	92.46	94.83	97.24	99.69	102.17	104.69	107.24	109.83	31
32	90.13	92.44	94.80	97.19	99.61	102.07	104.57	107.11	109.69	112.30	32
33	92.46	94.80	97.17	99.57	102.02	104.50	107.02	109.57	112.17	114.80	33
34	94.83	97.19	99.57	102.40	104.46	106.96	109.50	112.07	114.69	117.33	34
35	97.24	99.61	102.02	104.46	106.94	109.46	112.02	114.61	117.24	119.91	35
36	99.69	102.07	104.50	106.96	109.46	112.00	114.57	117.19	119.83	122.52	36
37	102.17	104.57	107.02	109.50	112.02	114.57	117.17	119.80	122.46	125.17	37
38	104.69	107.11	109.57	112.07	114.61	117.19	119.80	122.44	125.13	127.35	38
39	107.24	109.69	112.17	114.69	117.24	119.83	122.46	125.13	127.83	130.57	39
40	109.83	112.30	114.80	117.33	119.91	122.52	125.17	127.85	130.57	133.33	40
41	112.46	114.94	117.46	120.02	122.61	125.24	127.91	130.61	133.35	136.13	41
42	115.13	117.63	120.17	122.74	125.35	128.00	130.69	133.41	136.17	138.96	42
43	117.85	120.35	122.91	125.50	128.13	130.80	133.50	136.24	139.02	141.83	43
44	120.57	123.11	125.69	128.30	130.94	133.63	136.36	139.11	141.91	144.74	44
45	123.35	125.91	128.50	131.13	133.80	136.50	139.24	142.02	144.83	147.69	45
46	126.17	128.74	131.35	134.00	136.69	139.41	142.17	144.96	147.80	150.67	46
47	129.02	131.61	134.24	136.91	139.61	142.35	145.13	147.94	150.80	153.69	47
48	131.91	134.52	137.17	139.85	142.57	145.35	148.13	150.96	153.83	156.74	48
49	134.83	137.46	140.13	142.83	145.57	148.35	151.17	154.02	156.91	159.83	49
50	137.80	140.44	143.13	145.85	148.61	151.41	154.24	157.11	160.02	162.96	50
—	31	32	33	34	35	36	37	38	39	40	—

TABLE VI.—BASE 30—SLOPES $1\frac{1}{2}$ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	53.91	56.00	58.13	60.30	62.50	64.74	67.02	69.33	71.70	74.07	0
1	55.24	57.35	59.50	61.69	63.91	66.17	68.46	70.80	73.17	75.57	1
2	56.61	58.74	60.91	63.11	65.35	67.63	69.94	72.30	74.69	77.11	2
3	58.02	60.17	62.35	64.57	66.83	69.13	71.46	73.83	76.24	78.69	3
4	59.46	61.63	63.83	66.07	68.35	70.67	73.02	75.41	77.83	80.30	4
5	60.94	63.13	65.35	67.61	69.91	72.24	74.61	77.02	79.46	81.94	5
6	62.46	64.67	66.91	69.19	71.50	73.85	76.24	78.67	81.13	83.63	6
7	64.02	66.24	68.50	70.80	73.13	75.50	77.91	80.35	82.83	85.35	7
8	65.61	67.85	70.13	72.44	74.80	77.19	79.61	82.07	84.57	87.11	8
9	67.24	69.50	71.80	74.13	76.50	78.91	81.35	83.83	86.35	88.91	9
10	68.91	71.19	73 50	75.85	78.24	80.67	83.13	85.63	88.17	90.74	10
11	70.61	72.91	75.24	77.61	80.02	82.46	84.94	87.47	90.02	92.61	11
12	72.35	74.67	77.02	79.41	81.83	84.30	86.80	89.33	91.91	94.51	12
13	74.13	76.46	78.83	81.24	83.69	86.17	88.69	91.24	93.83	96.46	13
14	75.94	78.30	80.69	83.11	85.57	88.07	90.61	93.19	95.80	98.44	14
15	77.80	80.17	82.57	85.02	87.50	90.19	92.57	95.17	97.80	100.46	15
16	79.69	82.07	84.50	86.96	89.46	92.00	94.57	97.19	99.83	102.52	16
17	81.61	84.02	86.46	88.94	91.46	94.02	96.61	99.24	101.91	104.61	17
18	83.57	86.00	88.46	90.96	93.50	96.07	98.69	101.33	104.02	106.74	18
19	85.57	88.02	90.50	93.02	95.57	98.17	100.80	103.46	106.17	108.91	19
20	87.61	90.07	92.57	95.11	97.69	100.30	102.94	105.63	108.35	111.11	20
21	89.69	92.17	94.69	97.24	99.83	102.46	105.13	107.83	110.57	113.35	21
22	91.80	94.30	96.83	99.41	102.02	104.67	107.35	110.07	112.83	115.63	22
23	93.94	96.46	99.02	101.61	104.24	106.91	109.61	112.35	115.13	117.94	23
24	96.13	98.67	101.24	103.85	106.50	109.19	111.91	114.67	117.46	120.30	24
25	98.35	100.91	103.50	106.13	108.80	111.50	114.24	117.02	119.83	122.69	25
26	100.61	103.19	105.80	108.44	111.13	113.85	116.61	119.41	122.24	125.11	26
27	102.91	105.50	108.13	110.80	113.50	116.24	119.02	121.83	124.69	127.57	27
28	105.24	107.85	110.50	113.19	115.91	118.67	121.46	124.30	127.17	130.07	28
29	107.61	110.24	112.91	115.61	118.35	121.13	123.94	126.80	129.69	132.61	29
30	110.02	112.67	115.35	118.07	120.83	123.63	126.46	129.33	132.24	135.19	30
31	112.46	115.13	117.83	120.57	123.35	126.17	129.02	131.91	134.83	137.80	31
32	114.94	117.63	120.35	123.11	125.91	128.74	131.61	134.52	137.46	140.44	32
33	117.46	120.17	122.91	125.69	128.50	131.35	134.24	137.17	140.13	143.13	33
34	120.02	122.74	125.50	128.30	131.13	134.00	136.91	139.85	142.83	145.85	34
35	122.61	125.35	128.13	130.94	133.80	136.69	139.61	142.57	145.57	148.61	35
36	125.24	128.00	130.80	133.63	136.50	139.41	142.35	145.35	148.35	151.41	36
37	127.91	130.69	133.50	136.36	139.24	142.17	145.13	148.13	151.17	154.24	37
38	130.61	133.41	136.24	139.11	142.02	144.96	147.94	150.96	154.02	157.11	38
39	133.35	136.17	139.02	141.91	144.83	147.80	150.80	153.83	156.91	160.02	39
40	136.13	138.96	141.83	144.74	147.69	150.67	153.69	156.74	159.83	162.96	40
41	138.94	141.80	144.69	147.61	150.57	153.57	156.61	159.69	162.80	165.94	41
42	141.80	144.67	147.57	150.52	153.50	156.52	159.57	162.67	165.80	168.96	42
43	144.69	147.57	150.50	153.46	156.46	159.50	162.57	165.69	168.83	172.02	43
44	147.61	150.52	153.46	156.44	159.46	162.52	165.61	168.74	171.91	175.11	44
45	150.57	153.50	156.46	159.46	162.50	165.57	168.69	171.83	175.02	178.24	45
46	153.57	156.52	159.50	162.52	165.57	168.67	171.80	174.96	178.17	181.41	46
47	156.61	159.57	162.57	165.61	168.69	171.80	175.00	178.28	181.35	185.06	47
48	159.69	162.67	165.69	168.74	171.83	174.96	178.13	181.33	184.57	187.85	48
49	162.80	165.80	168.83	171.91	175.02	178.17	181.35	184.57	187.83	191.13	49
50	165.94	168.96	172.02	175.11	178.24	181.41	185.06	187.85	191.13	194.44	50
	41	42	43	44	45	46	47	48	49	50	

TABLE VII.—BASE 36—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.68	1.41	2.17	2.96	3.80	4.67	5.57	6.52	7.50	8.52	0
1	1.39	2.13	2.91	3.72	4.57	5.46	6.39	7.35	8.35	9.39	1
2	2.13	2.89	3.68	4.52	5.39	6.30	7.24	8.22	9.24	10.30	2
3	2.91	3.68	4.50	5.35	6.24	7.17	8.13	9.13	10.17	11.24	3
4	3.72	4.52	5.35	6.22	7.13	8.07	9.05	10.07	11.13	12.22	4
5	4.57	5.39	6.24	7.13	8.05	9.02	10.02	11.05	12.13	13.24	5
6	5.46	6.30	7.17	8.07	9.02	10.00	11.02	12.07	13.17	14.30	6
7	6.39	7.24	8.13	9.05	10.02	11.02	12.05	13.13	14.24	15.39	7
8	7.35	8.22	9.13	10.07	11.05	12.07	13.13	14.22	15.35	16.50	8
9	8.35	9.24	10.17	11.13	12.13	13.17	14.24	15.35	16.50	17.68	9
10	9.39	10.30	11.24	12.22	13.24	14.30	15.39	16.50	17.68	18.89	10
11	10.46	11.39	12.35	13.35	14.39	15.46	16.57	17.72	18.91	20.13	11
12	11.57	12.52	13.50	14.52	15.57	16.67	17.80	18.96	20.17	21.41	12
13	12.72	13.68	14.68	15.72	16.80	17.91	19.05	20.24	21.46	22.72	13
14	13.91	14.89	15.91	16.96	18.05	19.18	20.35	21.55	22.80	24.07	14
15	15.13	16.13	17.17	18.24	19.35	20.50	21.68	22.91	24.17	25.46	15
16	16.39	17.41	18.46	19.55	20.68	21.85	23.05	24.30	25.57	26.89	16
17	17.68	18.72	19.80	20.91	22.05	23.24	24.46	25.72	27.02	28.35	17
18	19.02	20.07	21.17	22.30	23.46	24.67	25.91	27.18	28.50	29.85	18
19	20.39	21.46	22.57	23.72	24.91	26.13	27.39	28.68	30.02	31.39	19
20	21.80	22.89	24.02	25.18	26.39	27.63	28.91	30.22	31.57	32.96	20
21	23.24	24.35	25.50	26.68	27.91	29.17	30.46	31.80	33.17	34.57	21
22	24.72	25.85	27.02	28.22	29.46	30.74	32.05	33.41	34.80	36.22	22
23	26.24	27.39	28.57	29.80	31.05	32.35	33.68	35.05	36.46	37.91	23
24	27.80	28.96	30.17	31.41	32.68	34.00	35.35	36.74	38.17	39.63	24
25	29.39	30.57	31.80	33.05	34.35	35.68	37.05	38.46	39.91	41.39	25
26	31.02	32.22	33.46	34.74	36.05	37.41	38.80	40.22	41.68	43.18	26
27	32.68	33.91	35.17	36.46	37.80	39.17	40.57	42.02	43.50	45.02	27
28	34.39	35.63	36.91	38.22	39.57	40.96	42.39	43.85	45.35	46.89	28
29	36.13	37.39	38.68	40.02	41.39	42.80	44.24	45.72	47.24	48.80	29
30	37.91	39.18	40.50	41.85	43.24	44.67	46.13	47.63	49.17	50.74	30
31	39.72	41.02	42.35	43.72	45.13	46.57	48.05	49.57	51.13	52.72	31
32	41.57	42.89	44.24	45.63	47.05	48.52	50.02	51.55	53.13	54.74	32
33	43.46	44.80	46.17	47.57	49.02	50.50	52.02	53.57	55.17	56.80	33
34	45.39	46.74	48.13	49.55	51.02	52.52	54.05	55.63	57.24	58.89	34
35	47.35	48.72	50.13	51.57	53.05	54.57	56.13	57.72	59.35	61.02	35
36	49.35	50.74	52.17	53.63	55.13	56.67	58.24	59.85	61.50	63.18	36
37	51.39	52.80	54.24	55.72	57.24	58.80	60.39	62.02	63.68	65.39	37
38	53.46	54.89	56.35	57.85	59.39	60.96	62.57	64.22	65.91	67.63	38
39	55.57	57.02	58.50	60.02	61.57	63.17	64.80	66.46	68.17	69.91	39
40	57.72	59.18	60.68	62.22	63.80	65.41	67.05	68.74	70.46	72.22	40
41	59.91	61.39	62.91	64.46	66.05	67.68	69.35	71.05	72.80	74.57	41
42	62.13	63.63	65.17	66.74	68.35	70.00	71.68	73.41	75.17	76.96	42
43	64.39	65.91	67.46	69.05	70.68	72.35	74.05	75.80	77.57	79.39	43
44	66.68	68.22	69.80	71.41	73.05	74.74	76.46	78.22	80.02	81.85	44
45	69.02	70.57	72.17	73.80	75.46	77.17	78.91	80.68	82.50	84.35	45
46	71.39	72.96	74.57	76.22	77.91	79.63	81.39	83.18	85.02	86.89	46
47	73.80	75.39	77.02	78.68	80.39	82.13	83.91	85.72	87.57	89.46	47
48	76.24	77.85	79.50	81.18	82.91	84.67	86.46	88.30	90.17	92.07	48
49	78.72	80.35	82.02	83.72	85.46	87.24	89.05	90.91	92.80	94.72	49
50	81.24	82.89	84.57	86.30	88.05	89.85	91.68	93.55	95.46	97.41	50
	1	2	3	4	5	6	7	8	9	10	

TABLE VII.—BASE 36—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.57	10.67	11.80	12.96	14.17	15.41	16.68	18.00	19.35	20.74	0
1	10.46	11.57	12.72	13.91	15.13	16.39	17.68	19.02	20.39	21.80	1
2	11.39	12.52	13.68	14.89	16.13	17.41	18.72	20.07	21.46	22.89	2
3	12.35	13.50	14.68	15.91	17.17	18.46	19.80	21.17	22.57	24.02	3
4	13.35	14.52	15.72	16.96	18.24	19.55	20.91	22.30	23.72	25.18	4
5	14.39	15.57	16.80	18.05	19.35	20.68	22.05	23.46	24.91	26.39	5
6	15.46	16.67	17.91	19.18	20.50	21.85	23.24	24.67	26.13	27.63	6
7	16.57	17.80	19.05	20.35	21.68	23.05	24.46	25.91	27.39	28.91	7
8	17.72	18.96	20.24	21.55	22.91	24.30	25.72	27.18	28.68	30.22	8
9	18.91	20.17	21.46	22.80	24.17	25.57	27.02	28.50	30.02	31.57	9
10	20.13	21.41	22.72	24.07	25.46	26.89	28.35	29.85	31.39	32.96	10
11	21.39	22.68	24.02	25.39	26.80	28.24	29.72	31.24	32.80	34.39	11
12	22.68	24.00	25.35	26.74	28.17	29.63	31.13	32.67	34.24	35.85	12
13	24.02	25.35	26.72	28.13	29.57	31.05	32.57	34.13	35.72	37.35	13
14	25.39	26.74	28.13	29.55	31.02	32.52	34.05	35.63	37.24	38.89	14
15	26.80	28.17	29.57	31.02	32.50	34.02	35.57	37.17	38.80	40.46	15
16	28.24	29.63	31.05	32.52	34.02	35.55	37.13	38.74	40.39	42.07	16
17	29.72	31.13	32.57	34.05	35.57	37.13	38.72	40.35	42.02	43.72	17
18	31.24	32.67	34.13	35.63	37.17	38.74	40.35	42.00	43.68	45.41	18
19	32.80	34.24	35.72	37.24	38.80	40.39	42.02	43.68	45.39	47.13	19
20	34.39	35.85	37.35	38.89	40.46	42.07	43.72	45 41	47.13	48.89	20
21	36.02	37.50	39.02	40.57	42.17	43.80	45.46	47.17	48.91	50.68	21
22	37.68	39.18	40.72	42.30	43.91	45.55	47.24	48.96	50.72	52.52	22
23	39.39	40.91	42.46	44.05	45.68	47.35	49.05	50.80	52.57	54.39	23
24	41.13	42.67	44.24	45.85	47.50	49.18	50.91	52.67	54.46	56.30	24
25	42.91	44.46	46.05	47.68	49.35	51.05	52.80	54.57	56.39	58.24	25
26	44.72	46.30	47.91	49.55	51.24	52.96	54.72	56.52	58.35	60.22	26
27	46.57	48.17	49.80	51.46	53.17	54.91	56.68	58.50	60.35	62.24	27
28	48.46	50.07	51.72	53.41	55.13	56.89	58.68	60.52	62.39	64.30	28
29	50.39	52.02	53.68	55.39	57.13	58.91	60.72	62.57	64.46	66.39	29
30	52.35	54.00	55.68	57.41	59.17	60.96	62.80	64.67	66.57	68.52	30
31	54.35	56.02	57.72	59.46	61.24	63.05	64.91	66.80	68.72	70.68	31
32	56.39	58.07	59.80	61.55	63.35	65.18	67.05	68.96	70.91	72.89	32
33	58.46	60.17	61.91	63.68	65.50	67.35	69.24	71.17	73.13	75.12	33
34	60.57	62.30	64.05	65.85	67.68	69.55	71.46	73.41	75.39	77.41	34
35	62.72	64.46	66.24	68.05	69.91	71.80	73.72	75.68	77.68	79.72	35
36	64.91	66.67	68.46	70.30	72.17	74.07	76.02	78.00	80.02	82.07	36
37	67.13	68.91	70.72	72.57	74.46	76.39	78.35	80.35	82.39	84.46	37
38	69.39	71.18	73.02	74.89	76.80	78.74	80.72	82.74	84.80	86.89	38
39	71.68	73.50	75.35	77.24	79.17	81.13	83.13	85.17	87.24	89.35	39
40	74.02	75.85	77.72	79.63	81.57	83.55	85.57	87.63	89.72	91.85	40
41	76.39	78.24	80.13	82.05	84.02	86.02	88.05	90.13	92.24	94.39	41
42	78.80	80.67	82.57	84.52	86.50	88.52	90.57	92.67	94.80	96.96	42
43	81.24	83.13	85.05	87.02	89.02	91.05	93.13	95.24	97.39	99.57	43
44	83.72	85.63	87.57	89.55	91.57	93.63	95.72	97.85	100.02	102.22	44
45	86.24	88.17	90.13	92.13	94.17	96.24	98.35	100.50	102.68	104.91	45
46	88.80	90.74	92.72	94.74	96.80	98.89	101.02	103.18	105.39	107.63	46
47	91.39	93.35	95.35	97.39	99.46	101.57	103.72	105.91	108.13	110.39	47
48	94.02	96.00	98.02	100.07	102.17	104.30	106.46	108.67	110.91	113.18	48
49	96.68	98.68	100.72	102.80	104.91	107.05	109.24	111.46	113.72	116.02	49
50	99.39	101.41	103.46	105.55	107.68	109.85	112.06	114.30	116.57	118.89	50
	11	12	13	14	15	16	17	18	19	20	

TABLE VII.—BASE 36—SLOPES 1½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	22.17	23.63	25.13	26.67	28.24	29.85	31.50	33.18	34.91	36.67	0
1	23.24	24.72	26.24	27.80	29.39	31.02	32.68	34.39	36.13	37.91	1
2	24.35	25.85	27.39	28.96	30.57	32.22	33.91	35.63	37.39	39.18	2
3	25.50	27.02	28.57	30.17	31.80	33.46	35.17	36.91	38.68	40.50	3
4	26.68	28.22	29.80	31.41	33.05	34.74	36.46	38.22	40.02	41.85	4
5	27.91	29.46	31.05	32.68	34.35	36.05	37.80	39.57	41.39	43.24	5
6	29.17	30.74	32.35	34.00	35.68	37.41	39.17	40.96	42.80	44.67	6
7	30.46	32.05	33.68	35.35	37.05	38.80	40.57	42.39	44.24	46.13	7
8	31.80	33.41	35.05	36.74	38.46	40.22	42.02	43.85	45.72	47.63	8
9	33.17	34.80	36.46	38.17	39.91	41.68	43.50	45.35	47.24	49.17	9
10	34.57	36.22	37.91	39.63	41.39	43.18	45.02	46.89	48.80	50.74	10
11	36.02	37.68	39.39	41.13	42.91	44.72	46.57	48.46	50.39	52.35	11
12	37.50	39.18	40.91	42.67	44.46	46.30	48.17	50.07	52.02	54.00	12
13	39.02	40.72	42.46	44.24	46.05	47.91	49.80	51.72	53.68	55.68	13
14	40.57	42.30	44.05	45.85	47.68	49.55	51.46	53.41	55.39	57.41	14
15	42.17	43.91	45.68	47.50	49.35	51.24	53.17	55.13	57.13	59.17	15
16	43.80	45.55	47.35	49.18	51.05	52.96	54.91	56.89	58.91	60.96	16
17	45.46	47.24	49.05	50.91	52.80	54.72	56.68	58.68	60.72	62.80	17
18	47.17	48.96	50.80	52.67	54.57	56.52	58.50	60.52	62.57	64.67	18
19	48.91	50.72	52.57	54.46	56.39	58.35	60.35	62.39	64.46	66.57	19
20	50.68	52.52	54.39	56.30	58.24	60.22	62.24	64.30	66.39	68.52	20
21	52.50	54.35	56.24	58.17	60.13	62.13	64.17	66.24	68.35	70.52	21
22	54.35	56.22	58.13	60.07	62.05	64.07	66.13	68.22	70.35	72.52	22
23	56.24	58.13	60.05	62.02	64.02	66.05	68.13	70.24	72.39	74.57	23
24	58.17	60.07	62.02	64.00	66.02	68.07	70.17	72.30	74.46	76.67	24
25	60.13	62.05	64.02	66.02	68.05	70.13	72.24	74.39	76.57	78.80	25
26	62.13	64.07	66.05	68.07	70.13	72.22	74.35	76.52	78.72	80.96	26
27	64.17	66.13	68.13	70.17	72.24	74.35	76.50	78.68	80.91	83.17	27
28	66.24	68.22	70.24	72.30	74.39	76.52	78.68	80.89	83.13	85.41	28
29	68.35	70.35	72.39	74.46	76.57	78.72	80.91	83.13	85.39	87.68	29
30	70.52	72.52	74.57	76.67	78.80	80.96	83.17	85.41	87.68	90.00	30
31	72.68	74.72	76.80	78.91	81.05	83.24	85.46	87.72	90.02	92.35	31
32	74.91	76.96	79.05	81.18	83.35	85.55	87.80	90.07	92.39	94.74	32
33	77.17	79.24	81.35	83.50	85.68	87.91	90.17	92.46	94.80	97.17	33
34	79.46	81.55	83.68	85.85	88.05	90.30	92.57	94.89	97.24	99.63	34
35	81.80	83.91	86.05	88.24	90.46	92.72	95.02	97.35	99.72	102.13	35
36	84.17	86.30	88.46	90.67	92.91	95.18	97.50	99.85	102.24	104.67	36
37	86.57	88.72	90.91	93.13	95.39	97.68	100.02	102.39	104.80	107.24	37
38	89.02	91.18	93.39	95.63	97.91	100.22	102.57	104.96	107.39	109.85	38
39	91.50	93.68	95.91	98.17	100.46	102.80	105.17	107.57	110.02	112.50	39
40	94.02	96.22	98.46	100.74	103.05	105.41	107.80	110.22	112.68	115.18	40
41	96.57	98.80	101.05	103.35	105.68	108.05	110.46	112.91	115.39	117.91	41
42	99.17	101.41	103.68	106.00	108.35	110.74	113.17	115.63	118.13	120.67	42
43	101.80	104.05	106.35	108.68	111.05	113.46	115.91	118.39	120.91	123.46	43
44	104.46	106.74	109.05	111.41	113.80	116.22	118.68	121.18	123.72	126.30	44
45	107.17	109.46	111.80	114.17	116.57	119.02	121.50	124.02	126.57	129.17	45
46	109.91	112.22	114.57	116.96	119.39	121.85	124.35	126.89	129.46	132.07	46
47	112.68	115.02	117.39	119.80	122.24	124.72	127.24	129.80	132.39	135.02	47
48	115.50	117.85	120.24	122.67	125.13	127.63	130.17	132.74	135.35	138.00	48
49	118.35	120.72	123.13	125.57	128.05	130.57	133.13	135.72	138.35	141.02	49
50	121.24	123.63	126.05	128.52	131.02	133.35	136.13	138.74	141.39	144.07	50
	21	22	23	24	25	26	27	28	29	30	

TABLE VII.—BASE 36—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	38.46	40.30	42.17	44.07	46.02	48.00	50.02	52.07	54.17	56.30	0
1	39.72	41.57	43.46	45.39	47.35	49.35	51.39	53.46	55.57	57.72	1
2	41.02	42.89	44.80	46.74	48.72	50.74	52.80	54.89	57.02	59.18	2
3	42.35	44.24	46.17	48.13	50.13	52.17	54.24	56.35	58.50	60.68	3
4	43.72	45.63	47.57	49.55	51.57	53.63	55.72	57.85	60.02	62.22	4
5	45.13	47.05	49.02	51.02	53.05	55.13	57.24	59.39	61.57	63.80	5
6	46.57	48.52	50.50	52.52	54.57	56.67	58.80	60.96	63.17	65.41	6
7	48.05	50.02	52.02	54.05	56.13	58.24	60.39	62.57	64.80	67.05	7
8	49.57	51.55	53.57	55.63	57.72	59.85	62.02	64.22	66.46	68.74	8
9	51.13	53.13	55.17	57.24	59.35	61.50	63.68	65.91	68.17	70.46	9
10	52.72	54.74	56.80	58.89	61.02	63.18	65.39	67.63	69.91	72.22	10
11	54.35	56.39	58.46	60.57	62.72	64.91	67.13	69.39	71.68	74.02	11
12	56.02	58.07	60.17	62.30	64.46	66.67	68.91	71.18	73.50	75.85	12
13	57.72	59.80	61.91	64.05	66.24	68.46	70.72	73.02	75.35	77.72	13
14	59.46	61.55	63.68	65.85	68.05	70.30	72.57	74.89	77.24	79.63	14
15	61.24	63.35	65.50	67.68	69.91	72.17	74.46	76.80	79.17	81.57	15
16	63.05	65.18	67.35	69.55	71.80	74.07	76.39	78.74	81.13	83.55	16
17	64.91	67.05	69.24	71.46	73.72	76.02	78.35	80.72	83.13	85.57	17
18	66.80	68.96	71.17	73.41	75.68	78.00	80.35	82.74	85.17	87.63	18
19	68.72	70.91	73.13	75.39	77.68	80.02	82.39	84.80	87.24	89.72	19
20	70.68	72.89	75.13	77.41	79.72	82.07	84.46	86.89	89.35	91.85	20
21	72.68	74.91	77.17	79.46	81.80	84.17	86.57	89.02	91.50	94.02	21
22	74.72	76.96	79.24	81.55	83.91	86.30	88.72	91.18	93.68	96.22	22
23	76.80	79.05	81.35	83.68	86.05	88.46	90.91	93.39	95.91	98.46	23
24	78.91	81.18	83.50	85.85	88.24	90.67	93.13	95.63	98.17	100.74	24
25	81.05	83.35	85.68	88.05	90.46	92.91	95.39	97.91	100.46	103.05	25
26	83.24	85.55	87.91	90.30	92.72	95.18	97.68	100.22	102.80	105.41	26
27	85.46	87.80	90.17	92.57	95.02	97.50	100.02	102.57	105.17	107.80	27
28	87.72	90.07	92.46	94.89	97.35	99.85	102.39	104.96	107.57	110.22	28
29	90.02	92.39	94.80	97.24	99.72	102.24	104.80	107.39	110.02	112.68	29
30	92.35	94.74	97.17	99.63	102.13	104.67	107.24	109.85	112.50	115.18	30
31	94.72	97.13	99.57	102.05	104.57	107.13	109.72	112.35	115.02	117.72	31
32	97.13	99.55	102.02	104.52	107.05	109.63	112.24	114.89	117.57	120.30	32
33	99.57	102.02	104.50	107.02	109.57	112.17	114.80	117.46	120.17	122.91	33
34	102.05	104.52	107.02	109.55	112.13	114.74	117.39	120.07	122.80	125.55	34
35	104.57	107.05	109.57	112.13	114.72	117.35	120.02	122.72	125.46	128.24	35
36	107.13	109.63	112.17	114.74	117.35	120.00	122.68	125.41	128.17	130.96	36
37	109.72	112.24	114.80	117.39	120.02	122.68	125.39	128.13	130.91	133.72	37
38	112.35	114.89	117.46	120.07	122.72	125.41	128.13	130.89	133.69	136.52	38
39	115.02	117.57	120.17	122.80	125.46	128.17	130.91	133.69	136.50	139.35	39
40	117.72	120.30	122.91	125.55	128.24	130.96	133.72	136.52	139.35	142.22	40
41	120.46	123.05	125.68	128.35	131.05	133.80	136.57	139.39	142.24	145.13	41
42	123.24	125.85	128.50	131.18	133.91	136.67	139.46	142.30	145.17	148.07	42
43	126.05	128.68	131.35	134.05	136.80	139.57	142.39	145.24	148.13	151.05	43
44	128.91	131.55	134.24	136.96	139.72	142.52	145.35	148.22	151.13	154.07	44
45	131.80	134.46	137.17	139.91	142.68	145.50	148.35	151.24	154.17	157.13	45
46	134.72	137.41	140.13	142.89	145.68	148.52	151.39	154.30	157.24	160.22	46
47	137.68	140.39	143.13	145.91	148.72	151.57	154.46	157.39	160.35	163.35	47
48	140.68	143.41	146.17	148.96	151.80	154.67	157.57	160.52	163.50	166.52	48
49	143.72	146.46	149.24	152.05	154.91	157.80	160.72	163.68	166.68	169.72	49
50	146.80	149.55	152.35	155.18	158.05	160.96	163.91	166.89	169.91	172.96	50
	31	32	33	34	35	36	37	38	39	40	

TABLE VII.—BASE 36—SLOPES 1½ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	58.46	60.67	62.91	65.18	67.50	69.85	72.24	74.67	77.13	79.63	0
1	59.91	62.13	64.39	66.68	69.02	71.39	73.80	76.24	78.72	81.24	1
2	61.39	63.63	65.91	68.22	70.57	72.96	75.39	77.85	80.35	82.89	2
3	62.91	65.17	67.46	69.80	72.17	74.57	77.02	79.50	82.02	84.57	3
4	64.46	66.74	69.05	71.41	73.80	76.22	78.68	81.18	83.72	86.30	4
5	66.05	68.35	70.68	73.05	75.46	77.91	80.39	82.91	85.46	88.05	5
6	67.68	70.00	72.35	74.74	77.17	79.63	82.13	84.67	87.24	89.85	6
7	69.35	71.68	74.05	76.46	78.91	81.39	83.91	86.46	89.05	91.68	7
8	71.05	73.41	75.80	78.22	80.68	83.18	85.72	88.30	90.91	93.55	8
9	72.80	75.17	77.57	80.02	82.50	85.02	87.57	90.17	92.80	95.46	9
10	74.57	76.96	79.39	81.85	84.35	86.89	89.46	92.07	94.72	97.41	10
11	76.39	78.80	81.24	83.72	86.24	88.80	91.39	94.02	96.68	99.39	11
12	78.24	80.67	83.13	85.63	88.17	90.74	93.35	96.00	98.68	101.41	12
13	80.13	82.57	85.05	87.57	90.13	92.72	95.35	98.02	100.72	103.46	13
14	82.05	84.52	87.02	89.55	92.13	94.74	97.39	100.07	102.80	105.55	14
15	84.02	86.50	89.02	91.57	94.17	96.80	99.46	102.17	104.91	107.68	15
16	86.02	88.52	91.05	93.63	96.24	98.89	101.57	104.30	107.05	109.85	16
17	88.05	90.57	93.13	95.72	98.35	101.02	103.72	106.46	109.24	112.05	17
18	90.13	92.67	95.24	97.85	100.50	103.18	105.91	108.67	111.46	114.30	18
19	92.24	94.80	97.39	100.02	102.68	105.39	108.13	110.91	113.72	116.57	19
20	94.39	96.96	99.57	102.22	104.91	107.63	110.39	113.18	116.02	118.89	20
21	96.57	99.17	101.80	104.46	107.17	109.91	112.68	115.50	118.35	121.24	21
22	98.80	101.41	104.05	106.74	109.46	112.22	115.02	117.85	120.72	123.63	22
23	101.05	103.68	106.35	109.05	111.80	114.57	117.39	120.24	123.13	126.05	23
24	103.35	106.00	108.68	111.41	114.17	116.96	119.80	122.67	125.57	128.52	24
25	105.68	108.35	111.05	113.80	116.57	119.39	122.24	125.13	128.05	131.02	25
26	108.05	110.74	113.46	116.22	119.02	121.85	124.72	127.63	130.57	133.55	26
27	110.46	113.17	115.91	118.68	121.50	124.35	127.24	130.17	133.13	136.13	27
28	112.91	115.63	118.39	121.18	124.02	126.89	129.80	132.74	135.72	138.74	28
29	115.39	118.13	120.91	123.72	126.57	129.46	132.39	135.35	138.35	141.39	29
30	117.91	120.67	123.46	126.30	129.17	132.07	135.02	138.00	141.02	144.07	30
31	120.46	123.24	126.05	128.91	131.80	134.72	137.68	140.68	143.72	146.80	31
32	123.05	125.85	128.68	131.55	134.46	137.41	140.39	143.41	146.46	149.55	32
33	125.68	128.50	131.35	134.24	137.17	140.13	143.13	146.17	149.24	152.35	33
34	128.35	131.18	134.05	136.96	139.91	142.89	145.91	148.96	152.05	155.18	34
35	131.05	133.91	136.80	139.72	142.68	145.68	148.72	151.80	154.91	158.05	35
36	133.80	136.67	139.57	142.52	145.50	148.52	151.57	154.67	157.80	160.96	36
37	136.57	139.46	142.39	145.35	148.35	151.39	154.46	157.57	160.72	163.91	37
38	139.39	142.30	145.24	148.22	151.24	154.30	157.39	160.52	163.68	166.89	38
39	142.24	145.17	148.13	151.13	154.17	157.24	160.35	163.50	166.68	169.91	39
40	145.13	148.07	151.05	154.07	157.13	160.22	163.35	166.52	169.72	172.96	40
41	148.05	151.02	154.02	157.05	160.13	163.24	166.39	169.57	172.80	176.05	41
42	151.02	154.00	157.02	160.07	163.17	166.30	169.46	172.67	175.91	179.18	42
43	154.02	157.02	160.05	163.13	166.24	169.39	172.57	175.80	179.05	182.35	43
44	157.05	160.07	163.13	166.22	169.35	172.52	175.72	178.96	182.24	185.55	44
45	160.13	163.17	166.24	169.35	172.50	175.68	178 91	182.17	185.46	188.80	45
46	163.24	166.30	169.39	172.52	175.68	178.89	182.13	185.41	188.72	192.07	46
47	166.39	169.46	172.57	175.72	178.91	182.13	185.39	188.68	192.02	195.39	47
48	169.57	172.67	175.80	178.96	182.17	185.41	188.68	192.00	195.35	198.74	48
49	172.80	175.91	179.05	182.24	185.46	188.72	192.02	195.35	198.72	202.13	49
50	176.05	179.18	182.35	185.55	188.80	192.07	195.35	198.74	202.13	205.55	50
	41	42	43	44	45	46	47	48	49	50	

TABLE VIII.—BASE 40—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.76	1.55	2.39	3.78	4.17	5.11	6.09	7.11	8.17	9.26	0
1	1.54	2.35	3.72	4.09	5.02	5.98	6.98	8.02	9.09	10.20	1
2	2.35	3.70	4.05	4.96	5.91	6.89	7.91	8.96	10.05	11.18	2
3	3.72	4.05	4.94	5.87	6.83	7.83	8.87	9.94	11.05	12.20	3
4	4.09	4.96	5.87	6.81	7.80	8.81	9.87	10.96	12.09	13.26	4
5	5.02	5.91	6.83	7.80	8.80	9.83	10.91	12.02	13.17	14.36	5
6	5.98	6.89	7.83	8.81	9.83	10.89	11.98	13.11	14.28	15.48	6
7	6.98	7.91	8.87	9.87	10.91	11.98	13.09	14.24	15.42	16.65	7
8	8.02	8.96	9.94	10.96	12.02	13.11	14.24	15.41	16.61	17.85	8
9	9.09	10.05	11.05	12.09	13.17	14.28	15.42	16.61	17.83	19.09	9
10	10.20	11.18	12.20	13.26	14.36	15.48	16.65	17.85	19.09	20.37	10
11	11.35	12.35	13.38	14.46	15.57	16.72	17.91	19.13	20.39	21.68	11
12	12.54	13.55	14.61	15.70	16.83	18.00	19.20	20.44	21.72	23.04	12
13	13.76	14.80	15.87	16.98	18.13	19.31	20.54	21.80	23.09	24.42	13
14	15.02	16.07	17.17	18.30	19.46	20.67	21.91	23.18	24.50	25.85	14
15	16.31	17.39	18.50	19.65	20.83	22.05	23.31	24.61	25.94	27.31	15
16	17.65	18.74	19.87	21.04	22.24	23.48	24.76	26.07	27.42	28.81	16
17	19.02	20.13	21.28	22.46	23.68	24.94	26.24	27.57	28.94	30.35	17
18	20.42	21.55	22.72	23.92	25.17	26.44	27.76	29.11	30.50	31.92	18
19	21.87	23.02	24.20	25.42	26.68	27.98	29.31	30.68	32.09	33.54	19
20	23.35	24.52	25.72	26.96	28.24	29.55	30.91	32.30	33.72	35.18	20
21	24.87	26.05	27.28	28.54	29.83	31.17	32.54	33.94	35.39	36.87	21
22	26.42	27.63	28.87	30.15	31.46	32.81	34.20	35.63	37.09	38.59	22
23	28.02	29.24	30.50	31.80	33.13	34.50	35.91	37.35	38.83	40.35	23
24	29.65	30.89	32.17	33.48	34.83	36.22	37.65	39.11	40.61	42.15	24
25	31.31	32.57	33.87	35.20	36.57	37.98	39.42	40.91	42.42	43.98	25
26	33.02	34.30	35.61	36.96	38.35	39.78	41.24	42.74	44.28	45.85	26
27	34.76	36.05	37.39	38.76	40.17	41.61	43.09	44.61	46.17	47.76	27
28	36.54	37.85	39.20	40.59	42.02	43.48	44.98	46.52	48.09	49.70	28
29	38.35	39.68	41.05	42.46	43.91	45.39	46.91	48.46	50.05	51.68	29
30	40.20	41.55	42.94	44.37	45.83	47.33	48.87	50.44	52.05	53.70	30
31	42.09	43.46	44.87	46.31	47.80	49.31	50.87	52.46	54.09	55.70	31
32	44.02	45.41	46.83	48.30	49.80	51.33	52.91	54.52	56.17	57.85	32
33	45.98	47.39	48.83	50.31	51.83	53.99	54.98	56.61	58.28	59.98	33
34	47.98	49.41	50.87	52.37	53.91	55.48	57.09	58.74	60.42	62.15	34
35	50.02	51.46	52.94	54.46	56.02	57.61	59.24	60.91	62.61	64.35	35
36	52.09	53.55	55.05	56.59	58.17	59.78	61.42	63.11	64.83	66.59	36
37	54.20	55.68	57.20	58.76	60.35	61.98	63.65	65.35	67.09	68.87	37
38	56.35	57.85	59.39	60.96	62.57	64.22	65.91	67.63	69.39	71.18	38
39	58.54	60.05	61.61	63.20	64.83	66.50	68.20	69.94	71.72	73.54	39
40	60.76	62.30	63.87	65.48	67.13	68.81	70.54	72.30	74.09	75.92	40
41	63.02	64.57	66.17	67.80	69.46	71.17	72.91	74.68	76.50	78.35	41
42	65.31	66.89	68.50	70.15	71.83	73.55	75.31	77.11	78.94	80.81	42
43	67.65	69.24	70.87	72.54	74.24	75.98	77.76	79.57	81.42	83.31	43
44	70.02	71.63	73.28	74.96	76.68	78.44	80.24	82.07	83.94	85.85	44
45	72.42	74.05	75.72	77.42	79.17	80.94	82.76	84.61	86.50	88.42	45
46	74.87	76.52	78.20	79.92	81.68	83.48	85.31	87.18	89.09	91.04	46
47	77.35	79.02	80.72	82.46	84.24	86.05	87.91	89.80	91.72	93.68	47
48	79.87	81.55	83.28	85.04	86.83	88.67	90.54	92.44	94.39	96.37	48
49	82.42	84.13	85.87	87.65	89.46	91.31	93.20	95.13	97.09	99.09	49
50	85.02	86.74	88.50	90.30	92.13	94.00	95.91	97.85	99.83	101.85	50
	1	2	3	4	5	6	7	8	9	10	

TABLE VIII.—BASE 40—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	10.39	11.55	12.76	14.00	15.28	16.59	17.94	19.33	20.76	22.22	0
1	11.35	12.54	13.76	15.02	16.31	17.65	19.02	20.42	21.87	23.35	1
2	12.35	13.55	14.80	16.07	17.39	18.74	20.13	21.55	23.02	24.52	2
3	13.38	14.61	15.87	17.17	18.50	19.87	21.28	22.72	24.20	25.72	3
4	14.46	15.70	16.98	18.30	19.65	21.04	22.46	23.92	25.42	26.96	4
5	15.57	16.83	18.13	19.46	20.83	22.24	23.68	25.17	26.68	28.24	5
6	16.72	18.00	19.31	20.67	22.05	23.48	24.94	26.44	27.98	29.55	6
7	17.91	19.20	20.54	21.91	23.31	24.76	26.24	27.76	29.31	30.91	7
8	19.13	20.44	21.80	23.18	24.61	26.07	27.57	29.11	30.68	32.30	8
9	20.39	21.72	23.09	24.50	25.94	27.42	28.94	30.50	32.09	33.72	9
10	21.68	23.04	24.42	25.85	27.31	28.81	30.35	31.92	33.54	35.18	10
11	23.02	24.39	25.80	27.24	28.72	30.24	31.80	33.39	35.02	36.68	11
12	24.39	25.78	27.20	28.67	30.17	31.70	33.28	34.89	36.54	38.22	12
13	25.80	27.20	28.65	30.13	31.65	33.20	34.80	36.42	38.09	39.80	13
14	27.24	28.67	30.13	31.63	33.17	34.74	36.35	38.00	39.68	41.41	14
15	28.72	30.17	31.65	33.17	34.72	36.31	37.94	39.61	41.31	43.05	15
16	30.24	31.70	33.20	34.74	36.31	37.92	39.57	41.26	42.98	44.74	16
17	31.80	33.28	34.80	36.35	37.94	39.57	41.24	42.94	44.68	46.46	17
18	33.39	34.89	36.42	38.00	39.61	41.26	42.94	44.67	46.42	48.22	18
19	35.02	36.54	38.09	39.68	41.31	42.98	44.68	46.42	48.20	50.02	19
20	36.68	38.22	39.80	41.41	43.05	44.74	46.46	48.22	50.02	51.85	20
21	38.39	39.94	41.54	43.17	44.83	46.54	48.28	50.05	51.87	53.72	21
22	40.13	41.70	43.31	44.96	46.65	48.37	50.13	51.92	53.76	55.63	22
23	41.91	43.50	45.13	46.80	48.50	50.24	52.02	53.83	55.68	57.57	23
24	43.72	45.33	46.98	48.67	50.39	52.15	53.94	55.78	57.65	59.55	24
25	45.57	47.20	48.87	50.57	52.31	54.09	55.91	57.76	59.65	61.57	25
26	47.46	49.11	50.80	52.52	54.28	56.07	57.91	59.78	61.68	63.63	26
27	49.39	51.05	52.76	54.50	56.28	58.09	59.94	61.83	63.76	65.73	27
28	51.35	53.04	54.76	56.52	58.31	60.15	62.02	63.92	65.87	67.85	28
29	53.35	55.05	56.80	58.57	60.39	62.24	64.13	66.05	68.02	70.02	29
30	55.39	57.11	58.87	60.67	62.50	64.37	66.28	68.22	70.20	72.22	30
31	57.46	59.20	60.98	62.80	64.65	66.54	68.46	70.42	72.42	74.46	31
32	59.57	61.33	63.13	64.96	66.83	68.74	70.68	72.67	74.68	76.74	32
33	61.72	63.50	65.31	67.17	69.05	70.98	72.94	74.94	76.98	79.05	33
34	63.91	65.70	67.54	69.41	71.31	73.26	75.24	77.26	79.31	81.41	34
35	66.13	67.94	69.80	71.68	73.61	75.57	77.57	79.61	81.68	83.80	35
36	68.39	70.22	72.09	74.00	75.94	77.92	79.94	82.00	84.09	86.22	36
37	70.68	72.54	74.42	76.35	78.31	80.31	82.35	84.42	86.54	88.68	37
38	73.02	74.89	76.80	78.74	80.72	82.74	84.80	86.89	89.02	91.18	38
39	75.39	77.28	79.20	81.17	83.17	85.20	87.28	89.39	91.54	93.72	39
40	77.80	79.70	81.64	83.63	85.65	87.70	89.80	91.92	94.09	96.30	40
41	80.24	82.17	84.13	86.03	88.17	90.24	92.35	94.50	96.68	98.81	41
42	82.72	84.67	86.65	88.67	90.72	92.81	94.94	97.11	99.31	101.55	42
43	85.24	87.20	89.20	91.24	93.31	95.42	97.57	99.76	101.98	104.24	43
44	87.80	89.78	91.80	93.85	95.94	98.07	100.24	102.44	104.68	106.96	44
45	90.39	92.39	94.42	96.50	98.61	100.76	102.94	105.17	107.42	109.72	45
46	93.02	95.04	97.09	99.18	101.31	103.48	105.68	107.92	110.20	112.52	46
47	95.68	97.72	99.80	101.91	104.05	106.24	108.46	110.72	113.02	115.35	47
48	98.39	100.44	102.54	104.67	106.83	109.04	111.28	113.55	115.87	118.22	48
49	101.13	103.20	105.31	107.96	109.65	111.87	114.13	116.42	118.76	121.13	49
50	103.91	106.00	108.13	110.30	112.50	114.74	117.02	119.33	121.68	124.07	50
	11	12	13	14	15	16	17	18	19	20	

TABLE VIII.—BASE 40—SLOPES 1½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	23.72	25.26	26.83	28.44	30.09	31.78	33.50	35.26	37.05	38.89	0
1	24.87	26.42	28.02	29.65	31.31	33.02	34.76	36.54	38.35	40.20	1
2	26.05	27.63	29.24	30.89	32.57	34.30	36.05	37.85	39.68	41.55	2
3	27.28	28.87	30.50	32.17	33.87	55.61	37.39	39.20	41.05	42.94	3
4	28.54	30.15	31.80	33.48	35.20	36.96	38.76	40.59	42.46	44.37	4
5	29.83	31.46	33.13	34.83	36.57	38.35	40.17	42.02	43.91	45.83	5
6	31.17	32.81	34.50	36.22	37.98	39.78	41.61	43.48	45.39	47.33	6
7	32.54	34.20	35.91	37.65	39.42	41.24	43.09	44.98	46.91	48.87	7
8	33.94	35.63	37.35	39.11	40.91	42.74	44.61	46.52	48.46	50.44	8
9	35.39	37.09	38.83	40.61	42.42	44.28	46.17	48.09	50.05	52.05	9
10	36.87	38.59	40.35	42.15	43.98	45.85	47.76	49.70	51.68	53.70	10
11	38.39	40.13	41.91	43.72	45.57	47.46	49.39	51.35	53.35	55.39	11
12	39.94	41.70	43.50	45.33	47.20	49.11	51.05	53.04	55.05	57.11	12
13	41.54	43.31	45.13	46.98	48.87	50.80	52.76	54.76	56.80	58.87	13
14	43.17	44.96	46.80	48.67	50.57	52.52	54.50	56.52	58.57	60.67	14
15	44.83	46.65	48.50	50.39	52.31	54.28	56.28	58.31	60.39	62.50	15
16	46.54	48.37	50.24	52.15	54.09	56.07	58.09	60.15	62.24	64.37	16
17	48.28	50.13	52.02	53.94	55.91	57.91	59.94	62.02	64.13	66.28	17
18	50.05	51.92	53.83	55.78	57.76	59.78	61.83	63.92	66.05	68.22	18
19	51.87	53.76	55.68	57.65	59.65	61.68	63.76	65.87	68.02	70.20	19
20	53.72	55.63	57.57	59.55	61.57	63.63	65.73	67.85	70.02	72.22	20
21	55.61	57.54	59.50	61.50	63.54	65.61	67.72	69.87	72.05	74.28	21
22	57.54	59.48	61.46	63.48	65.54	67.63	69.76	71.92	74.13	76.37	22
23	59.50	61.46	63.46	65.50	67.57	69.68	71.83	74.02	76.24	78.50	23
24	61.50	63.48	65.50	67.55	69.65	71.78	73.94	76.15	78.39	80.67	24
25	63.54	65.54	67.57	69.65	71.76	73.91	76.09	78.31	80.57	82.87	25
26	65.61	67.63	69.68	71.78	73.91	76.07	78.28	80.52	82.80	85.11	26
27	67.72	69.76	71.83	73.94	76.09	78.28	80.50	82.76	85.05	87.39	27
28	69.87	71.92	74.02	76.15	78.31	80.52	82.76	85.04	87.35	89.70	28
29	72.05	74.13	76.24	78.39	80.57	82.80	85.05	87.35	89.68	92.05	29
30	74.28	76.37	78.50	80.67	82.87	85.11	87.39	89.70	92.05	94.44	30
31	76.54	78.65	80.80	82.98	85.20	87.46	89.76	92.09	94.46	96.87	31
32	78.83	80.96	83.13	85.33	87.57	89.85	92.17	94.52	96.91	99.33	32
33	81.17	83.31	85.50	87.72	89.98	92.28	94.61	96.98	99.39	101.83	33
34	83.54	85.70	87.91	90.15	92.42	94.74	97.09	99.48	101.91	104.37	34
35	85.94	88.13	90.35	92.61	94.91	97.24	99.61	102.02	104.46	106.94	35
36	88.39	90.59	92.83	95.11	97.42	99.78	102.17	104.59	107.05	109.55	36
37	90.87	93.09	95.35	97.65	99.98	102.35	104.76	107.20	109.68	112.20	37
38	93.39	95.63	97.91	100.22	102.57	104.96	107.39	109.85	112.35	114.89	38
39	95.94	98.20	100.50	102.83	105.20	107.61	110.05	112.54	115.05	117.61	39
40	98.54	100.81	103.13	105.48	107.87	110.30	112.76	115.26	117.80	120.37	40
41	101.17	103.46	105.80	108.17	110.57	113.02	115.50	118.02	120.57	123.17	41
42	103.83	106.15	108.50	110.89	113.31	115.78	118.28	120.81	123.38	126.00	42
43	106.54	108.87	111.24	113.65	116.09	118.57	121.09	123.65	126.24	128.87	43
44	109.28	111.65	114.02	116.44	118.91	121.41	123.94	126.52	129.13	131.78	44
45	112.05	114.42	116.83	119.28	121.76	124.28	126.83	129.42	132.05	134.72	45
46	114.87	117.26	119.68	122.15	124.65	127.18	129.76	132.37	135.02	137.70	46
47	117.72	120.13	122.57	125.05	127.57	130.13	132.72	135.35	138.02	140.72	47
48	120.61	123.04	125.50	128.00	130.54	133.11	135.72	138.37	141.05	143.78	48
49	123.54	125.99	128.46	130.98	133.54	136.13	138.76	141.42	144.13	146.87	49
50	126.50	128.96	131.46	134.00	136.57	139.18	141.83	144.52	147.24	150.00	50
	21	22	23	24	25	26	27	28	29	30	

TABLE VIII.—BASE 40—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	40.76	42.67	44.61	46.59	48.61	50.67	52.76	54.89	57.05	59.26	0
1	42.09	44.02	45.98	47.98	50.02	52.09	54.20	56.35	58.54	60.76	1
2	43.46	45.41	47.39	49.41	51.46	53.55	55.68	57.85	60.05	62.30	2
3	44.87	46.83	48.83	50.87	52.94	55.05	57.20	59.39	61.61	63.87	3
4	46.31	48.30	50.31	52.37	54.46	56.59	58.76	60.96	63.20	65.48	4
5	47.80	49.80	51.83	53.91	56.02	58.17	60.35	62.57	64.83	67.13	5
6	49.31	51.33	53.39	55.48	57.61	59.78	61.98	64.22	66.50	68.81	6
7	50.87	52.91	54.98	57.09	59.24	61.42	63.65	65.91	68.20	70.54	7
8	52.46	54.52	56.61	58.74	60.91	63.11	65.35	67.63	69.94	72.30	8
9	54.09	56.17	58.28	60.42	62.61	64.83	67.09	69.39	71.72	74.09	9
10	55.76	57.85	59.98	62.15	64.35	66.59	68.87	71.18	73.54	75.92	10
11	57.46	59.57	61.72	63.91	66.13	68.39	70.68	73.02	75.39	77.80	11
12	59.20	61.33	63.50	65.70	67.94	70.22	72.54	74.89	77.28	79.70	12
13	60.98	63.13	65.31	67.54	69.80	72.09	74.42	76.80	79.20	81.64	13
14	62.80	64.96	67.17	69.41	71.68	74.00	76.35	78.74	81.17	83.63	14
15	64.65	66.83	69.05	71.31	73.61	75.94	78.31	80.72	83.17	85.65	15
16	66.54	68.74	70.98	73.26	75.57	77.92	80.31	82.74	85.20	87.70	16
17	68.46	70.68	72.94	75.24	77.57	79.94	82.35	84.80	87.28	89.80	17
18	70.42	72.67	74.94	77.26	79.61	82.00	84.42	86.89	89.39	91.92	18
19	72.42	74.68	76.98	79.31	81.68	84.09	86.54	89.02	91.54	94.09	19
20	74.46	76.74	79.05	81.41	83.80	86.22	88.68	91.18	93.72	96.30	20
21	76.54	78.83	81.17	83.54	85.94	88.39	90.87	93.39	95.94	98.54	21
22	78.65	80.96	83.31	85.70	88.13	90.59	93.09	95.63	98.20	100.81	22
23	80.80	83.13	85.50	87.91	90.35	92.83	95.35	97.91	100.50	103.13	23
24	82.98	85.33	87.72	90.15	92.61	95.11	97.65	100.22	102.83	105.48	24
25	85.20	87.57	89.98	92.42	94.91	97.42	99.98	102.57	105.20	107.87	25
26	87.46	89.85	92.28	94.74	97.24	99.78	102.35	104.96	107.61	110.30	26
27	89.76	92.17	94.61	97.09	99.61	102.17	104.76	107.39	110.05	112.76	27
28	92.09	94.52	96.98	99.48	102.02	104.59	107.20	109.85	112.54	115.26	28
29	94.46	96.91	99.39	101.91	104.46	107.05	109.68	112.35	115.05	117.80	29
30	96.87	99.33	101.83	104.37	106.94	109.55	112.20	114.89	117.61	120.37	30
31	99.31	101.80	104.31	106.87	109.46	112.09	114.76	117.46	120.20	122.98	31
32	101.80	104.30	106.83	109.41	112.02	114.67	117.35	120.07	122.83	125.63	32
33	104.31	106.83	109.39	111.98	114.61	117.28	119.98	122.72	125.50	128.31	33
34	106.87	109.41	111.98	114.59	117.24	119.92	122.65	125.41	128.20	131.04	34
35	109.46	112.02	114.61	117.24	119.91	122.61	125.35	128.13	130.94	133.80	35
36	112.09	114.67	117.28	119.92	122.61	125.33	128.09	130.89	133.72	136.59	36
37	114.76	117.35	119.98	122.65	125.35	128.09	130.87	133.68	136.54	139.42	37
38	117.46	120.07	122.72	125.41	128.13	130.89	133.68	136.52	139.39	142.30	38
39	120.20	122.83	125.50	128.20	130.94	133.72	136.54	139.39	142.28	145.20	39
40	122.98	125.63	128.31	131.04	133.80	136.59	139.42	142.30	145.20	148.15	40
41	125.80	128.46	131.17	133.91	136.68	139.50	142.35	145.24	148.17	151.13	41
42	128.65	131.35	134.05	136.81	139.61	142.44	145.31	148.22	151.17	154.15	42
43	131.54	134.24	136.98	139.76	142.57	145.42	148.31	151.24	154.20	157.20	43
44	134.46	137.18	139.94	142.74	145.57	148.44	151.35	154.30	157.28	160.30	44
45	137.42	140.17	142.94	145.76	148.61	151.50	154.42	157.39	160.39	163.42	45
46	140.42	143.18	145.98	148.81	151.68	154.59	157.54	160.52	163.54	166.59	46
47	143.46	146.24	149.05	151.91	154.80	157.72	160.68	163.68	166.72	169.80	47
48	146.54	149.33	152.17	155.04	157.94	160.89	163.87	166.89	169.94	173.04	48
49	149.65	152.46	155.31	158.20	161.13	164.09	167.09	170.13	173.20	176.31	49
50	152.80	155.63	158.50	161.41	164.35	167.33	170.35	173.41	176.50	179.63	50
	31	32	33	34	35	36	37	38	39	40	

TABLE VIII.—BASE 40—SLOPES $1\frac{1}{2}$ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	61.50	63.78	66.09	68.44	70.83	73.26	75.72	78.22	80.76	83.33	0
1	63.02	65.31	67.65	70.02	72.42	74.87	77.35	79.87	82.42	85.02	1
2	64.57	66.89	69.24	71.63	74.05	76.52	79.02	81.55	84.13	86.74	2
3	66.17	68.50	70.87	73.28	75.72	78.20	80.72	83.28	85.87	88.50	3
4	67.80	70.15	72.54	74.96	77.42	79.92	82.46	85.04	87.65	90.30	4
5	69.46	71.83	74.24	76.68	79.17	81.68	84.24	86.83	89.46	92.13	5
6	71.17	73.55	75.98	78.44	80.94	83.48	86.05	88.67	91.31	94.00	6
7	72.91	75.31	77.76	80.24	82.76	85.31	87.91	90.54	93.20	95.91	7
8	74.68	77.11	79.57	82.07	84.61	87.18	89.80	92.44	95.13	97.85	8
9	76.50	78.94	81.42	83.94	86.50	89.09	91.72	94.39	97.09	99.83	9
10	78.35	80.81	83.31	85.85	88.42	91.04	93.68	96.37	99.09	101.85	10
11	80.24	82.72	85.24	87.80	90.39	93.02	95.68	98.39	101.13	103.91	11
12	82.17	84.67	87.20	89.78	92.39	95.04	97.72	100.44	103.20	106.00	12
13	84.13	86.65	89.20	91.80	94.42	97.09	99.80	102.54	105.31	108.13	13
14	86.03	88.67	91.24	93.85	96.50	99.18	101.91	104.67	107.96	110.30	14
15	88.17	90.72	93.31	95.94	98.61	101.31	104.05	106.83	109.65	112.50	15
16	90.24	92.81	95.42	98.07	100.76	103.48	106.24	109.04	111.87	114.74	16
17	92.35	94.94	97.57	100.24	102.94	105.68	108.46	111.28	114.13	117.02	17
18	94.50	97.11	99.76	102.44	105.17	107.92	110.72	113.55	116.42	119.33	18
19	96.68	99.31	101.98	104.68	107.42	110.20	113.02	115.87	118.76	121.68	19
20	98.91	101.55	104.24	106.96	109.72	112.52	115.35	118.22	121.13	124.07	20
21	101.17	103.83	106.54	109.28	112.05	114.87	117.72	120.61	123.54	126.50	21
22	103.46	106.15	108.87	111.63	114.42	117.26	120.13	123.04	125.99	128.96	22
23	105.80	108.50	111.24	114.02	116.83	119.68	122.57	125.50	128.46	131.46	23
24	108.17	110.89	113.65	116.44	119.28	122.15	125.05	128.00	130.98	134.00	24
25	110.57	113.31	116.09	118.91	121.76	124.65	127.57	130.54	133.54	136.57	25
26	113.02	115.78	118.57	121.41	124.28	127.18	130.13	133.11	136.13	139.18	26
27	115.50	118.28	121.09	123.94	126.83	129.76	132.72	135.72	138.76	141.83	27
28	118.02	120.81	123.65	126.52	129.42	132.37	135.35	138.37	141.42	144.52	28
29	120.57	123.38	126.24	129.13	132.05	135.02	138.02	141.05	144.13	147.24	29
30	123.17	126.00	128.87	131.78	134.72	137.70	140.72	143.78	146.87	150.00	30
31	125.80	128.65	131.54	134.46	137.42	140.42	143.46	146.54	149.65	152.80	31
32	128.46	131.33	134.24	137.18	140.17	143.18	146.24	149.33	152.46	155.63	32
33	131.17	134.05	136.98	139.94	142.94	145.98	149.05	152.17	155.31	158.50	33
34	133.91	136.81	139.76	142.74	145.76	148.81	151.91	155.04	158.20	161.41	34
35	136.68	139.61	142.57	145.57	148.61	151.68	154.80	157.94	161.13	164.35	35
36	139.50	142.44	145.42	148.44	151.50	154.59	157.72	160.89	164.09	167.33	36
37	142.35	145.31	148.31	151.35	154.42	157.54	160.68	163.87	167.09	170.35	37
38	145.24	148.22	151.24	154.30	157.39	160.52	163.68	166.89	170.13	173.41	38
39	148.17	151.17	154.20	157.28	160.39	163.54	166.72	169.94	173.20	176.50	39
40	151.13	154.15	157.20	160.30	163.42	166.59	169.80	173.04	176.31	179.63	40
41	154.13	157.17	160.24	163.35	166.50	169.68	172.91	176.17	179.46	182.80	41
42	157.17	160.22	163.31	166.44	169.61	172.81	176.05	179.33	182.65	186.00	42
43	160.24	163.31	166.42	169.57	172.76	175.98	179.24	182.54	185.87	189.24	43
44	163.35	166.44	169.57	172.74	175.94	179.18	182.46	185.78	189.13	192.52	44
45	166.50	169.61	172.76	175.94	179.17	182.42	185.72	189.05	192.42	195.83	45
46	169.68	172.81	175.98	179.18	182.42	185.70	189.02	192.37	195.76	199.18	46
47	172.91	176.05	179.24	182.46	185.72	189.02	192.35	195.72	199.13	202.57	47
48	176.17	179.33	182.54	185.78	189.05	192.37	195.72	199.11	202.54	206.00	48
49	179.46	182.65	185.87	189.13	192.42	195.76	199.13	202.54	205.98	209.46	49
50	182.80	186.00	189.24	192.52	195.83	199.18	202.57	206.00	209.46	212.96	50
	41	42	43	44	45	46	47	48	49	50	

TABLE IX.—BASE 50—SLOPES 1½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.94	1.92	2.94	4.00	5.09	6.22	7.39	8.59	9.83	11.11	0
1	1.91	2.91	3.94	5.02	6.13	7.28	8.46	9.68	10.94	12.24	1
2	2.91	3.92	4.98	6.07	7.20	8.37	9.57	10.81	12.09	13.41	2
3	3.94	4.98	6.06	7.17	8.31	9.50	10.72	11.98	13.28	14.61	3
4	5.02	6.07	7.17	8.30	9.46	10.67	11.91	13.18	14.50	15.85	4
5	6.13	7.20	8.31	9.46	10.65	11.87	13.13	14.42	15.76	17.13	5
6	7.28	8.37	9.50	10.67	11.87	13.11	14.39	15.70	17.06	18.44	6
7	8.46	9.57	10.72	11.91	13.13	14.39	15.68	17.02	18.39	19.80	7
8	9.68	10.81	11.98	13.18	14.42	15.70	17.02	18.37	19.76	21.18	8
9	10.94	12.09	13.28	14.50	15.76	17.06	18.39	19.76	21.17	22.61	9
10	12.24	13.41	14.61	15.85	17.13	18.44	19.80	21.18	22.61	24.07	10
11	13.57	14.76	15.98	17.24	18.54	19.87	21.24	22.65	24.09	25.57	11
12	14.94	16.15	17.39	18.67	19.98	21.33	22.72	24.15	25.61	27.11	12
13	16.35	17.57	18.83	20.13	21.46	22.83	24.24	25.68	27.17	28.68	13
14	17.80	19.04	20.31	21.63	22.98	24.37	25.80	27.26	28.76	30.30	14
15	19.28	20.54	21.83	23.17	24.54	25.94	27.39	28.87	30.39	31.94	15
16	20.80	22.07	23.39	24.74	26.13	27.56	29.02	30.52	32.06	33.63	16
17	22.35	23.65	24.98	26.35	27.76	29.20	30.68	32.20	33.76	35.35	17
18	23.94	25.26	26.61	28.00	29.42	30.89	32.39	33.92	35.50	37.11	18
19	25.57	26.91	28.28	29.68	31.13	32.61	34.13	35.68	37.28	38.91	19
20	27.24	28.59	29.98	31.41	32.87	34.37	35.91	37.48	39.09	40.74	20
21	28.94	30.31	31.72	33.17	34.65	36.17	37.72	39.31	40.94	42.61	21
22	30.68	32.07	33.50	34.96	36.46	38.00	39.57	41.18	42.83	44.52	22
23	32.46	33.87	35.31	36.80	38.31	39.87	41.46	43.09	44.76	46.46	23
24	34.28	35.70	37.17	38.67	40.20	41.78	43.39	45.04	46.72	48.44	24
25	36.13	37.57	39.06	40.57	42.13	43.72	45.35	47.02	48.72	50.46	25
26	38.02	39.48	40.98	42.52	44.09	45.70	47.35	49.04	50.76	52.52	26
27	39.94	41.42	42.94	44.50	46.09	47.72	49.39	51.09	52.83	54.61	27
28	41.91	43.41	44.94	46.52	48.13	49.78	51.46	53.18	54.94	56.74	28
29	43.91	45.42	46.98	48.57	50.20	51.87	53.57	55.31	57.09	58.91	29
30	45.94	47.48	49.06	50.67	52.31	54.00	55.72	57.48	59.28	61.11	30
31	48.02	49.57	51.17	52.80	54.46	56.17	57.91	59.68	61.50	63.35	31
32	50.13	51.70	53.31	54.96	56.65	58.37	60.13	61.92	63.76	65.63	32
33	52.28	53.87	55.50	57.17	58.87	60.61	62.39	64.20	66.06	67.94	33
34	54.46	56.07	57.72	59.41	61.13	62.89	64.68	66.52	68.39	70.30	34
35	56.68	58.31	59.98	61.68	63.42	65.20	67.02	68.87	70.76	72.68	35
36	58.94	60.59	62.28	64.00	65.76	67.56	69.39	71.26	73.17	75.11	36
37	61.24	62.91	64.61	66.35	68.13	69.94	71.80	73.68	75.61	77.57	37
38	63.57	65.26	66.98	68.74	70.54	72.37	74.24	76.15	78.09	80.07	38
39	65.94	67.65	69.39	71.17	72.98	74.83	76.72	78.65	80.61	82.61	39
40	68.35	70.07	71.85	73.63	75.46	77.33	79.24	81.18	83.17	85.18	40
41	70.80	72.54	74.31	76.13	77.98	79.87	81.80	83.76	85.76	87.80	41
42	73.28	75.04	76.83	78.67	80.54	82.44	84.39	86.37	88.39	90.44	42
43	75.80	77.57	79.39	81.24	83.13	85.06	87.02	89.02	91.06	93.13	43
44	78.35	80.15	81.98	83.85	85.76	87.70	89.68	91.70	93.76	95.85	44
45	80.94	82.76	84.61	86.50	88.42	90.39	92.38	94.42	96.50	98.61	45
46	83.57	85.41	87.28	89.18	91.13	93.11	95.13	97.18	99.28	101.41	46
47	86.24	88.09	89.98	91.91	94.87	95.87	97.91	99.98	102.09	104.24	47
48	88.94	90.81	92.72	94.67	96.65	98.67	100.72	102.81	104.94	107.11	48
49	91.68	93.57	95.50	97.46	99.46	101.50	103.57	105.68	107.83	110.02	49
50	94.46	96.37	98.31	100.30	102.31	104.37	106.46	108.59	110.76	112.96	50
	1	2	3	4	5	6	7	8	9	10	

TABLE IX.—BASE 50—SLOPES 1½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	12.42	13.78	15.17	16.59	18.06	19.56	21.09	22.67	24.28	25.92	0
1	13.57	14.94	16.35	17.80	19.28	20.80	22.35	23.94	25.57	27.24	1
2	14.76	16.15	17.57	19.04	20.54	22.07	23.65	25.26	26.91	28.59	2
3	15.98	17.39	18.83	20.31	21.83	23.39	24.98	26.61	28.28	29.98	3
4	17.24	18.67	20.13	21.63	23.17	24.74	26.35	28.00	29.68	31.41	4
5	18.54	19.98	21.46	22.98	24.54	26.13	27.76	29.42	31.13	32.87	5
6	19.87	21.33	22.83	24.37	25.94	27.56	29.20	30.89	32.61	34.37	6
7	21.24	22.72	24.24	25.80	27.39	29.02	30.68	32.39	34.13	35.91	7
8	22.65	24.15	25.68	27.26	28.87	30.52	32.20	33.92	35.68	37.48	8
9	24.09	25.61	27.17	28.76	30.39	32.06	33.76	35.50	37.28	39.09	9
10	25.57	27.11	28.68	30.30	31.94	33.63	35.35	37.11	38.91	40.74	10
11	27.09	28.65	30.24	31.87	33.54	35.24	36.98	38.76	40.57	42.42	11
12	28.65	30.22	31.83	33.48	35.17	36.89	38.65	40.44	42.28	44.15	12
13	30.24	31.83	33.46	35.13	36.83	38.57	40.35	42.17	44.02	45.91	13
14	31.87	33.48	35.13	36.81	38.54	40.30	42.09	43.92	45.80	47.70	14
15	33.54	35.17	36.83	38.54	40.28	42.06	43.87	45.72	47.61	49.54	15
16	35.24	36.89	38.57	40.30	42.06	43.85	45.68	47.56	49.46	51.41	16
17	36.98	38.65	40.35	42.09	43.87	45.68	47.54	49.42	51.35	53.31	17
18	38.76	40.44	42.17	43.92	45.72	47.56	49.42	51.33	53.28	55.26	18
19	40.57	42.28	44.02	45.80	47.61	49.46	51.35	53.28	55.24	57.24	19
20	42.42	44.15	45.91	47.70	49.54	51.41	53.31	55.26	57.24	59.26	20
21	44.31	46.06	47.83	49.65	51.50	53.39	55.31	57.28	59.28	61.31	21
22	46.24	48.00	49.80	51.63	53.50	55.41	57.35	59.33	61.35	63.41	22
23	48.20	49.98	51.80	53.65	55.54	57.46	59.42	61.42	63.46	65.54	23
24	50.20	52.00	53.83	55.70	57.61	59.56	61.54	63.56	65.61	67.70	24
25	52.24	54.06	55.91	57.80	59.72	61.68	63.68	65.72	67.80	69.91	25
26	54.31	56.15	58.02	59.92	61.87	63.85	65.87	67.92	70.02	72.15	26
27	56.42	58.28	60.17	62.09	64.06	66.06	68.09	70.17	72.28	74.42	27
28	58.57	60.44	62.35	64.30	66.28	68.30	70.35	72.44	74.57	76.74	28
29	60.76	62.65	64.57	66.54	68.54	70.57	72.65	74.76	76.91	79.09	29
30	62.98	64.89	66.83	68.81	70.83	72.89	74.98	77.11	79.28	81.48	30
31	65.24	67.17	69.13	71.13	73.17	75.24	77.35	79.50	81.68	83.91	31
32	67.54	69.48	71.46	73.48	75.54	77.63	79.76	81.92	84.13	86.37	32
33	69.87	71.83	73.83	75.87	77.94	80.06	82.20	84.39	86.61	88.87	33
34	72.24	74.22	76.24	78.30	80.39	82.52	84.68	86.88	89.13	91.41	34
35	74.65	76.65	78.68	80.76	82.87	85.02	87.20	89.42	91.68	93 98	35
36	77.09	79.11	81.17	83.26	85.39	87.56	89.76	92.00	94.28	96.59	36
37	79.57	81.61	83.68	85.80	87.94	90.13	92.35	94.61	96.91	99.24	37
38	82.09	84.15	86.24	88.37	90.54	92.74	94.98	97.26	99.57	101.92	38
39	84.65	86.72	88.83	90.98	93.17	95.39	97.65	99.94	102.28	104.65	39
40	87.24	89.33	91.46	93.63	95.83	98.07	100.35	102.67	105.02	107.41	40
41	89.87	91.98	94.13	96.31	98.54	100.80	103.09	105.42	107.80	110.20	41
42	92.54	94.67	96.83	99.04	101.28	103.55	105.87	108.22	110.61	113.04	42
43	95.24	97.39	99.57	101.80	104.05	106.35	108.68	111.05	113.46	115.91	43
44	97.98	100.15	102.35	104.59	106.87	109.18	111.54	113.92	116.35	118.81	44
45	100.76	102.94	105.17	107.42	109.72	112.06	114.42	116.83	119.28	121.76	45
46	103.57	105.78	108.02	110.30	112.61	114.96	117.35	119.78	122.24	124.74	46
47	106.42	108.65	110.91	113.20	115.54	117.91	120.31	122.76	125.24	127.76	47
48	109.31	111.56	113.83	116.15	118.50	120.89	123.31	125.78	128.28	130.81	48
49	112.24	114.50	116.80	119.13	121.50	123.91	126.35	128.83	131.35	133.91	49
50	115.20	117.48	119.80	122.15	124.54	126.96	129.42	131.92	134.46	137.04	50
	11	12	13	14	15	16	17	18	19	20	

TABLE IX.—BASE 50—SLOPES 1½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	27.61	29.33	31.09	32.89	34.72	36.59	38.50	40.44	42.42	44.44	0
1	28.94	30.68	32.46	34.28	36.13	38.02	39.94	41.91	43.91	45.94	1
2	30.31	32.07	33.87	35.70	37.57	39.48	41.42	43.41	45.42	47.48	2
3	31.72	33.50	35.31	37.17	39.06	40.98	42.94	44.94	46.98	49.06	3
4	33.17	34.96	36.80	38.67	40.57	42.52	44.50	46.52	48.57	50.67	4
5	34.65	36.46	38.31	40.20	42.13	44.09	46.09	48.13	50.20	52.31	5
6	36.17	38.00	39.87	41.78	43.72	45.70	47.72	49.78	51.87	54.00	6
7	37.72	39.57	41.46	43.39	45.35	47.35	49.39	51.46	53.57	55.72	7
8	39.31	41.18	43.09	45.04	47.02	49.04	51.09	53.18	55.31	57.48	8
9	40.94	42.83	44.76	46.72	48.72	50.76	52.83	54.94	57.09	59.28	9
10	42.61	44.52	46.46	48.44	50.46	52.52	54.61	56.74	58.91	61.11	10
11	44.31	46.24	48.20	50.20	52.24	54.31	56.42	58.57	60.76	62.98	11
12	46.06	48.00	49.98	52.00	54.06	56.15	58.28	60.44	62.65	64.89	12
13	47.83	49.80	51.80	53.83	55.91	58.02	60.17	62.35	64.57	66.83	13
14	49.65	51.63	53.65	55.70	57.80	59.92	62.09	64.30	66.54	68.81	14
15	51.50	53.50	55.54	57.61	59.72	61.87	64.06	66.28	68.54	70.83	15
16	53.39	55.41	57.46	59.56	61.68	63.85	66.06	68.30	70.57	72.89	16
17	55.31	57.35	59.42	61.54	63.68	65.87	68.09	70.35	72.65	74.98	17
18	57.28	59.33	61.42	63.56	65.72	67.92	70.17	72.44	74.76	77.11	18
19	59.28	61.35	63.46	65.61	67.80	70.02	72.28	74.57	76.91	79.28	19
20	61.31	63.41	65.54	67.70	69.91	72.15	74.42	76.74	79.09	81.48	20
21	63.39	65.50	67.65	69.83	72.06	74.31	76.61	78.94	81.31	83.72	21
22	65.50	67.63	69.80	72.00	74.24	76.52	78.83	81.18	83.57	86.00	22
23	67.65	69.80	71.98	74.20	76.46	78.76	81.09	83.46	85.87	88.31	23
24	69.83	72.00	74.20	76.44	78.72	81.04	83.39	85.78	88.20	90.67	24
25	72.06	74.24	76.46	78.72	81.02	83.35	85.72	88.13	90.57	93.06	25
26	74.31	76.52	78.76	81.04	83.35	85.70	88.09	90.52	92.98	95.48	26
27	76.61	78.83	81.09	83.39	85.72	88.09	90.50	92.94	95.42	97.94	27
28	78.94	81.18	83.46	85.78	88.13	90.52	92.94	95.41	97.91	100.44	28
29	81.31	83.57	85.87	88.20	90.57	92.98	95.42	97.91	100.42	102.98	29
30	83.72	86.00	88.31	90.67	93.06	95.48	97.94	100.44	102.98	105.56	30
31	86.17	88.46	90.80	93.17	95.57	98.02	100.50	103.02	105.57	108.17	31
32	88.65	90.96	93.31	95.70	98.13	100.59	103.09	105.63	108.20	110.81	32
33	91.17	93.50	95.87	98.28	100.72	103.20	105.72	108.28	110.87	113.50	33
34	93.72	96.07	98.46	100.89	103.35	105.85	108.39	110.96	113.57	116.22	34
35	96.31	98.68	101.09	103.54	106.02	108.54	111.09	113.68	116.31	118.98	35
36	98.94	101.33	103.76	106.22	108.72	111.26	113.83	116.44	119.09	121.78	36
37	101.61	104.02	106.46	108.94	111.46	114.02	116.61	119.24	121.91	124.61	37
38	104.31	106.74	109.20	111.70	114.24	116.81	119.42	122.07	124.76	127.48	38
39	107.06	109.50	111.98	114.50	117.06	119.65	122.28	124.94	127.64	130.39	39
40	109.83	112.30	114.80	117.33	119.91	122.52	125.17	127.85	130.57	133.33	40
41	112.65	115.13	117.65	120.20	122.80	125.42	128.09	130.80	133.54	136.31	41
42	115.50	118.00	120.54	123.11	125.72	128.37	131.06	133.78	136.54	139.33	42
43	118.39	120.91	123.46	126.06	128.68	131.35	134.06	136.80	139.57	142.39	43
44	121.31	123 85	126.42	129.04	131.68	134.37	137.09	139.85	142.65	145.48	44
45	124.28	126.83	129.42	132.06	134.72	137.42	140.17	142.94	145.76	148.61	45
46	127.28	129.85	132.46	135.11	137.80	140.52	143.28	146.07	148.91	151.78	46
47	130.31	132 91	135.54	138.20	140.91	143.65	146.42	149.24	152.09	154.98	47
48	133.39	136.00	138.65	141.33	144.07	146.81	149.61	152.44	155.31	158.22	48
49	136.50	139.13	141.80	144.50	147.24	150.02	152.83	155.68	158.57	161.50	49
50	139.65	142.30	144.98	147.70	150.46	153.26	156.09	158.96	161.87	164.81	50
—	21	22	23	24	25	26	27	28	29	30	—

TABLE IX.—BASE 50—SLOPES 1½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	46.50	48.59	50.72	52.89	55.09	57.33	59.61	61.92	64.28	66.67	0
1	48.02	50.13	52.28	54.46	56.68	58.94	61.24	63.57	65.94	68.35	1
2	49.57	51.70	53.87	56.07	58.31	60.59	62.91	65.26	67.65	70.07	2
3	51.17	53.31	55.50	57.72	59.98	62.28	64.61	66.98	69.39	71.83	3
4	52.80	54.96	57.17	59.41	61.68	64.00	66.35	68.74	71.17	73.63	4
5	54.46	56.65	58.87	61.13	63.42	65.76	68.13	70.54	72.98	75.46	5
6	56.17	58.37	60.61	62.89	65.20	67.56	69.94	72.37	74.83	77.33	6
7	57.91	60.13	62.39	64.68	67.02	69.39	71.80	74.24	76.72	79.24	7
8	59.68	61.92	64.20	66.52	68.87	71.26	73.68	76.15	78.65	81.18	8
9	61.50	63.76	66.06	68.39	70.76	73.17	75.61	78.09	80.61	83.17	9
10	63.35	65.63	67.94	70.30	72.68	75.11	77.57	80.07	82.61	85.18	10
11	65.24	67.54	69.87	72.24	74.65	77.09	79.57	82.09	84.65	87.24	11
12	67.17	69.48	71.83	74.22	76.65	79.11	81.61	84.15	86.72	89.33	12
13	69.13	71.46	73.85	76.24	78.68	81.17	83.68	86.24	88.83	91.46	13
14	71.13	73.48	75.87	78.30	80.76	83.26	85.80	88.37	90.98	93.63	14
15	73.17	75.54	77.94	80.39	82.87	85.39	87.94	90.54	93.17	95.83	15
16	75.24	77.63	80.06	82.52	85.02	87.56	90.13	92.74	95.39	98.07	16
17	77.35	79.76	82.20	84.68	87.20	89.76	92.35	94.98	97.65	100.35	17
18	79.50	81.92	84.39	86.88	89.42	92.00	94.61	97.26	99.94	102.67	18
19	81.68	84.13	86.61	89.13	91.68	94.28	96.91	99.57	102.28	105.02	19
20	83.91	86.37	88.87	91.41	93.98	96.59	99.24	101.92	104.65	107.41	20
21	86.17	88.65	91.17	93.72	96.31	98.94	101.61	104.31	107.06	109.83	21
22	88.46	90.96	93.50	96.07	98.68	101.33	104.02	106.74	109.50	112.30	22
23	90.80	93.31	95.87	98.46	101.09	103.76	106.46	109.20	111.98	114 80	23
24	93.17	95.70	98.28	100.89	103.54	106.22	108.94	111.70	114.50	117.33	24
25	95.57	98.13	100.72	103.35	106.02	108.72	111.46	114.24	117.06	119.91	25
26	98.02	100.59	103.20	105.85	108.54	111.26	114.02	116.84	119.65	122.52	26
27	100.50	103.09	105.72	108.39	111.09	113.83	116.61	119.42	122.28	125.17	27
28	103.02	105.63	108.28	110.96	113.68	116.44	119.24	122.07	124.94	127.85	28
29	105.57	108.20	110.87	113.57	116.31	119.09	121.91	124.76	127.64	130.57	29
30	108.17	110.81	113.50	116.22	118.98	121.78	124.61	127.48	130.39	133.33	30
31	110.80	113.46	116.17	118.91	121.68	124.50	127.35	130.24	133.17	136.13	31
32	113.46	116.15	118.87	121.63	124.42	127.26	130.13	133.04	135.98	138.96	32
33	116.17	118.87	121.61	124.39	127.20	130.06	132.94	135.87	138.83	141.83	33
34	118.91	121.63	124.39	127.18	130.02	132.89	135.80	138.74	141.72	144.74	34
35	121.68	124.42	127.20	130.02	132.87	135.76	138.68	141.65	144.65	147.68	35
36	124.50	127.26	130.06	132.89	135.76	138.67	141.61	144.59	147.61	150.67	36
37	127.35	130.13	132.94	135.80	138.68	141.61	144.57	147.57	150.61	153.68	37
38	130.24	133.04	135.87	138.74	141.65	144.59	147.57	150.59	153.65	156.74	38
39	133.17	135.98	138.83	141.72	144.65	147.61	150.61	153.65	156.72	159.83	39
40	136.13	138.96	141.83	144.74	147.68	150.67	153.68	156.74	159.83	162.96	40
41	139.13	141.98	144.87	147.80	150.76	153.76	156.80	159.87	162.98	166.13	41
42	142.17	145.04	147.94	150.89	153.87	156.89	159.94	163.04	166.17	169.33	42
43	145.24	148.13	151.05	154.02	157.02	160.06	163.13	166.24	169.39	172.57	43
44	148.35	151.26	154.20	157.18	160.20	163.26	166.35	169.48	172.65	175.85	44
45	151.50	154.42	157.39	160.39	163.42	166.50	169.61	172.76	175.94	179.17	45
46	154.68	157.63	160.61	163.63	166.68	169.78	172.91	176.07	179.28	182.52	46
47	157.91	160.87	163.87	166.91	169.98	173.09	176.24	179.42	182.65	185.91	47
48	161.17	164.15	167.17	170.22	173.31	176.44	179.61	182.81	186.06	189.33	48
49	164.46	167.46	170.50	173.57	176.68	179.83	183.02	186.24	189.50	192.80	49
50	167.80	170.81	173.87	176.96	180.09	183.26	186.46	189.70	192.98	196.30	50
	31	32	33	34	35	36	37	38	39	40	

TABLE IX.—BASE 50—SLOPES 1½ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	69.09	71.56	74.06	76.59	79.17	81.78	84.42	87.11	89.83	92.59	0
1	70.80	73.28	75.80	78.35	80.94	83.57	86.24	88.94	91.68	94.46	1
2	72.54	75.04	77.57	80.15	82.76	85.41	88.09	90.81	93.57	96.37	2
3	74.31	76.83	79.39	81.98	84.61	87.28	89.98	92.72	95.50	98.31	3
4	76.13	78.67	81.24	83.85	86.50	89.18	91.91	94.67	97.46	100.30	4
5	77.98	80.54	83.13	85.76	88.42	91.13	94.87	96.65	99.46	102.31	5
6	79.87	82.44	85.06	87.70	90.39	93.11	95.87	98.67	101.50	104.37	6
7	81.80	84.39	87.02	89.68	92.38	95.13	97.91	100.72	103.57	106.46	7
8	83.76	86.37	89.02	91.70	94.42	97.18	99.98	102.81	105.68	108.59	8
9	85.76	88.39	91.06	93.76	96.50	99.28	102.09	104.94	107.83	110.76	9
10	87.80	90.44	93.13	95.85	98.61	101.41	104.24	107.11	110.02	112.96	10
11	89.87	92.54	95.24	97.98	100.76	103.57	106.42	109.31	112.24	115.20	11
12	91.98	94.67	97.39	100.15	102.94	105.78	108.65	111.56	114.50	117.48	12
13	94.13	96.83	99.57	102.35	105.17	108.02	110.91	113.83	116.80	119.80	13
14	96.31	99.04	101.80	104.59	107.42	110.30	113.20	116.15	119.13	122.15	14
15	98.54	101.28	104.05	106.87	109.72	112.61	115.54	118.50	121.50	124.54	15
16	100.80	103.55	106.35	109.18	112.06	114.96	117.91	120.89	123.91	126.96	16
17	103.09	105.87	108.68	111.54	114.42	117.35	120.31	123.31	126.35	129.42	17
18	105.42	108.22	111.05	113.92	116.83	119.78	122.76	125.78	128.83	131.92	18
19	107.80	110.61	113.46	116.35	119.28	122.24	125.24	128.28	131.35	134.46	19
20	110.20	113.04	115.91	118.81	121.76	124.74	127.76	130.81	133.91	137.04	20
21	112.65	115.50	118.39	121.31	124.28	127.28	130.31	133.39	136.50	139.65	21
22	115.13	118.00	120.91	123.85	126.83	129.85	132.91	136.00	139.13	142.30	22
23	117.65	120.54	123.46	126.42	129.42	132.46	135.54	138.65	141.80	144.98	23
24	120.20	123.11	126.06	129.04	132.06	135.11	138.20	141.33	144.50	147.70	24
25	122.80	125.72	128.68	131.68	134.72	137.80	140.91	144.07	147.24	150.46	25
26	125.42	128.37	131.35	134.37	137.42	140.52	143.65	146.81	150.02	153.26	26
27	128.09	131.06	134.06	137.09	140.17	143.28	146.42	149.61	152.83	156.09	27
28	130.80	133.78	136.80	139.85	142.94	146.07	149.24	152.44	155.68	158.96	28
29	133.54	136.54	139.57	142.65	145.76	148.91	152.09	155.31	158.57	161.87	29
30	136.31	139.33	142.39	145.48	148.61	151.78	154.98	158.22	161.50	164.81	30
31	139.13	142.17	145.24	148.35	151.50	154.68	157.91	161.17	164.46	167.80	31
32	141.98	145.04	148.13	151.26	154.42	157.63	160.87	164.15	167.46	170.81	32
33	144.87	147.94	151.05	154.20	157.39	160.61	163.87	167.17	170.50	173.87	33
34	147.80	150.89	154.02	157.18	160.39	163.63	166.91	170.22	173.57	176.96	34
35	150.76	153.87	157.02	160.20	163.42	166.68	169.98	173.31	176.68	180.09	35
36	153.76	156.89	160.06	163.26	166.50	169.78	173.09	176.44	179.83	183.26	36
37	156.80	159.94	163.13	166.35	169.61	172.91	176.24	179.61	183.02	186.46	37
38	159.87	163.04	166.24	169.48	172.76	176.07	179.42	182.81	186.24	189.70	38
39	162.98	166.17	169.39	172.65	175.94	179.28	182.65	186.06	189.50	192.98	39
40	166.13	169.33	172.57	175.85	179.17	182.52	185.91	189.33	192.80	196.30	40
41	169.31	172.54	175.80	179.09	182.42	185.80	189.20	192.65	196.13	199.65	41
42	172.54	175.78	179.06	182.37	185.72	189.11	192.54	196.00	199.50	203.04	42
43	175.80	179.06	182.35	185.68	189.06	192.46	195.91	199.39	202.91	206.46	43
44	179.09	182.37	185.68	189.04	192.42	195.85	199.31	202.81	206.35	209.92	44
45	182.42	185.72	189.05	192.42	195.83	199.28	202.76	206.28	209.83	213.42	45
46	185.80	189.11	192.46	195.85	199.28	202.74	206.24	209.78	213.35	216.96	46
47	189.20	192.54	195.91	199.31	202.76	206.24	209.76	213.31	216.91	220.54	47
48	192.65	196.00	199.39	202.81	206.28	209.78	213.31	216.89	220.50	224.15	48
49	196.13	199.50	202.91	206.35	209.83	213.35	216.91	220.50	224.13	227.80	49
50	199.65	203.04	206.46	209.92	213.42	216.96	220.54	224.15	227.80	231.48	50
	41	42	43	44	45	46	47	48	49	50	

TABLE X.—BASE 20—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.40	0.84	1.33	1.88	2.47	3.11	3 80	4.54	5.33	6.17	0
1	0.81	1.28	1.80	2.37	2.99	3.65	4.37	5.13	5.95	6.81	1
2	1.28	1.78	2.32	2.91	3.55	4.25	4.99	5.78	6.62	7.51	2
3	1.80	2.32	2.89	3.51	4.17	4.89	5.65	6.47	7.33	8.25	3
4	2.37	2.91	3.51	4.15	4.84	5.58	6.37	7.21	8.10	9.04	4
5	2.99	3.55	4.17	4.84	5.55	6.32	7.13	8.00	8.91	9.88	5
6	3.65	4.25	4.89	5.58	6.32	7.11	7.95	8.84	9.78	10.76	6
7	4.37	4.99	5.65	6.37	7.13	7.95	8.81	9.73	10.69	11.70	7
8	5.13	5.78	6.47	7.21	8.00	8.84	9.73	10.67	11.65	12.69	8
9	5.95	6.62	7.33	8.10	8.91	9.78	10.69	11.65	12.67	13.73	9
10	6.81	7.51	8.25	9.04	9.88	10.76	11.70	12.69	13.73	14.81	10
11	7.73	8.44	9.21	10.02	10.89	11.80	12.76	13.78	14.84	15.95	11
12	8.69	9.43	10.22	11.06	11.95	12.89	13.88	14.91	16.00	17.13	12
13	9.70	10.47	11.28	12.15	13.06	14.02	15.04	16.10	17.21	18.37	13
14	10.76	11.55	12.39	13.28	14.22	15.21	16.25	17.33	18.47	19.65	14
15	11.88	12.69	13.55	14.47	15.43	16.44	17.51	18.62	19.78	20.99	15
16	13.04	13.88	14.76	15.70	16.69	17.73	18.81	19.95	21.13	22.37	16
17	14.25	15.11	16.02	16.99	18.00	19.06	20.17	21.33	22.54	23.80	17
18	15.51	16.39	17.33	18.32	19.36	20.44	21.58	22.76	24.00	25.28	18
19	16.81	17.73	18.69	19.70	20.77	21.88	23.04	24.25	25.51	26.81	19
20	18.17	19.11	20.10	21.13	22.22	23.36	24.54	25.78	27.06	28.40	20
21	19.58	20.54	21.55	22.62	23.73	24.89	26.10	27.36	28.67	30.02	21
22	21.04	22.02	23.06	24.15	25.28	26.47	27.70	28.99	30.32	31.70	22
23	22.54	23.55	24.62	25.73	26.89	28.10	29.36	30.67	32.02	33.43	23
24	24.10	25.13	26.22	27.36	28.54	29.78	31.06	32.39	33.78	35.21	24
25	25.70	26.76	27.88	29.04	30.25	31.51	32.82	34.17	35.58	37.04	25
26	27.36	28.44	29.58	30.77	32.00	33.28	34.62	36.00	37.43	38.91	26
27	29.06	30.17	31.33	32.54	33.80	35.11	36.47	37.88	39.33	40.84	27
28	30.81	31.95	33.13	34.37	35.65	36.99	38.37	39.80	41.28	42.81	28
29	32.62	33.78	34.99	36.25	37.56	38.91	40.32	41.78	43.28	44.84	29
30	34.47	35.65	36.89	38.18	39.51	40.89	42.32	43.80	45.33	46.91	30
31	36.37	37.58	38.73	40.15	41.51	42.91	44.37	45.88	47.43	49.04	31
32	38.32	39.55	40.84	42.18	43.56	44.99	46.47	48.00	49.58	51.21	32
33	40.32	41.58	42.89	44.25	45.65	47.11	48.62	50.17	51.78	53.43	33
34	42.37	43.65	44.99	46.37	47.80	49.28	50.82	52.39	54.02	55.70	34
35	44.47	45.78	47.13	48.54	50.00	51.51	53.06	54.67	56.32	58.02	35
36	46.62	47.95	49.33	50.77	52.25	53.78	55.36	56.99	58.67	60.40	36
37	48.81	50.17	51.58	53.04	54.54	56.10	57.70	59.36	61.06	62.81	37
38	51.06	52.44	53.88	55.36	56.89	58.47	60.10	61.78	63.51	65.28	38
39	53.36	54.76	56.22	57.73	59.28	60.89	62.54	64.25	66.00	67.80	39
40	55.70	57.13	58.62	60.15	61.73	63.36	65.04	66.76	68.54	70.37	40
41	58.10	59.55	61.06	62.62	64.22	65.88	67.58	69.33	71.13	72.99	41
42	60.54	62.02	63.55	65.13	66.77	68.44	70.17	71.95	73.78	75.65	42
43	63.04	64.54	66.10	67.70	69.36	71.06	72.81	74.62	76.47	78.37	43
44	65.58	67.11	68.69	70.32	72.00	73.73	75.51	77.33	79.21	81.13	44
45	68.17	69.73	71.33	72.99	74.69	76.44	78.25	80.10	82.00	83.95	45
46	70.81	72.39	74.02	75.70	77.43	79.21	81.04	82.91	84.84	86.81	46
47	73.51	75.11	76.77	78.47	80.22	82.02	83.88	85.78	87.73	89.73	47
48	76.25	77.88	79.55	81.28	83.06	84.89	86.76	88.69	90.67	92.69	48
49	79.04	80.69	82.39	84.15	85.95	87.80	89.70	91.65	93.65	95.70	49
50	81.88	83.55	85.28	87.06	88.89	90.76	92.69	94.67	96.69	98.76	50
	1	2	3	4	5	6	7	8	9	10	

TABLE X.—BASE 20—SLOPES 2 *to* 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	7.06	8.00	8.99	10.02	11.11	12.25	13.43	14.67	15.95	17.28	0
1	7.73	8.69	9.70	10.76	11.88	13.04	14.25	15.51	16.81	18.17	1
2	8.44	9.43	10.47	11.55	12.69	13.88	15.11	16.39	17.73	19.11	2
3	9.21	10.22	11.28	12.39	13.55	14.76	16.02	17.33	18.69	20.10	3
4	10.02	11.07	12.15	13.28	14.47	15.70	16.99	18.32	19.70	21.13	4
5	10.89	11.95	13.06	14.22	15.43	16.69	18.00	19.36	20.77	22.22	5
6	11.80	12.89	14.02	15.21	16.44	17.73	19.06	20.44	21.88	23.36	6
7	12.77	13.88	15.04	16.25	17.51	18.81	20.17	21.58	23.04	24.54	7
8	13.78	14.91	16.10	17.33	18.62	19.95	21.33	22.76	24.25	25.78	8
9	14.84	16.00	17.21	18.47	19.78	21.13	22.54	24.00	25.51	27.06	9
10	15.95	17.13	18.37	19.65	20.99	22.37	23.80	25.28	26.81	28.40	10
11	17.11	18.32	19.58	20.89	22.25	23.65	25.11	26.62	28.17	29.78	11
12	18.32	19.55	20.84	22.17	23.55	24.99	26.47	28.00	29.58	31.21	12
13	19.58	20.84	22.15	23.51	24.91	26.37	27.88	29.43	31.04	32.69	13
14	20.89	22.17	23.51	24.89	26.32	27.80	29.33	30.91	32.54	34.22	14
15	22.25	23.55	24.91	26.32	27.78	29.28	30.84	32.44	34.10	35.80	15
16	23.65	24.99	26.37	27.80	29.28	30.81	32.39	34.02	35.70	37.43	16
17	25.11	26.47	27.88	29.33	30.84	32.39	34.00	35.65	37.36	39.11	17
18	26.62	28.00	29.43	30.91	32.44	34.02	35.65	37.33	39.06	40.84	18
19	28.17	29.58	31.04	32.54	34.10	35.70	37.36	39.06	40.81	42.62	19
20	29.78	31.21	32.69	34.22	35.80	37.43	39.11	40.84	42.62	44.44	20
21	31.43	32.89	34.39	35.95	37.55	39.21	40.91	42.67	44.47	46.32	21
22	33.13	34.62	36.15	37.73	39.36	41.04	42.76	44.54	46.37	48.25	22
23	34.89	36.39	37.95	39.55	41.21	42.91	44.67	46.47	48.32	50.22	23
24	36.69	38.22	39.80	41.43	43.11	44.84	46.62	48.44	50.32	52.25	24
25	38.55	40.10	41.70	43.36	45.06	46.81	48.62	50.47	52.37	54.32	25
26	40.44	42.02	43.65	45.33	47.06	48.84	50.67	52.54	54.47	56.44	26
27	42.40	44.00	45.65	47.36	49.11	50.91	52.76	54.67	56.62	58.62	27
28	44.40	46.02	47.70	49.43	51.21	53.04	54.91	56.84	58.81	60.84	28
29	46.44	48.10	49.80	51.55	53.36	55.21	57.11	59.06	61.06	63.11	29
30	48.55	50.22	51.95	53.73	55.55	57.43	59.36	61.33	63.36	65.43	30
31	50.69	52.39	54.15	55.95	57.80	59.70	61.65	63.65	65.70	67.80	31
32	52.89	54.62	56.39	58.22	60.10	62.02	64.00	66.02	68.10	70.22	32
33	55.13	56.89	58.69	60.54	62.44	64.39	66.39	68.44	70.54	72.69	33
34	57.43	59.21	61.04	62.91	64.84	66.81	68.84	70.91	73.04	75.21	34
35	59.78	61.58	63.43	65.33	67.28	69.28	71.33	73.43	75.58	77.78	35
36	62.17	64.00	65.88	67.80	69.78	71.80	73.88	76.00	78.17	80.40	36
37	64.62	66.47	68.37	70.32	72.32	74.37	76.47	78.62	80.81	83.06	37
38	67.11	68.99	70.91	72.89	74.91	76.99	79.11	81.28	83.51	85.78	38
39	69.65	71.55	73.51	75.51	77.55	79.65	81.80	84.00	86.25	88.54	39
40	72.25	74.17	76.15	78.17	80.25	82.37	84.54	86.77	89.04	91.36	40
41	74.89	76.84	78.84	80.89	82.99	85.13	87.33	89.58	91.88	94.22	41
42	77.58	79.55	81.58	83.65	85.78	87.95	90.17	92.44	94.77	97.13	42
43	80.32	82.32	84.37	86.47	88.62	90.81	93.06	95.36	97.70	100.10	43
44	83.11	85.13	87.21	89.33	91.51	93.73	96.00	98.32	100.69	103.11	44
45	85.95	88.00	90.10	92.25	94.44	96.69	98.99	101.33	103.73	106.17	45
46	88.84	90.91	93.04	95.21	97.43	99.70	102.02	104.39	106.81	109.28	46
47	91.78	93.88	96.02	98.22	100.47	102.76	105.11	107.51	109.95	112.44	47
48	94.77	96.89	99.06	101.28	103.55	105.88	108.25	110.67	113.13	115.65	48
49	97.80	99.95	102.15	104.39	106.69	109.04	111.43	113.88	116.37	118.91	49
50	100.89	103.06	105.28	107.55	109.88	112.25	114.67	117.13	119.65	122.22	50
	11	12	13	14	15	16	17	18	19	20	

TABLE X.—BASE 20—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	18.67	20.10	21.58	23.11	24.69	26.32	28.00	29.73	31.51	33.33	0
1	19.58	21.04	22.54	24.10	25.70	27.36	29.06	30.81	32.62	34.47	1
2	20.54	22.02	23.55	25.13	26.76	28.44	30.17	31.95	33.78	35.65	2
3	21.55	23.06	24.62	26.22	27.88	29.58	31.33	33.13	34.99	36.89	3
4	22.62	24.15	25.73	27.36	29.04	30.77	32.54	34.37	36.25	38.18	4
5	23.73	25.28	26.89	28.54	30.25	32.00	33.80	35.65	37.56	39.51	5
6	24.89	26.47	28.10	29.78	31.51	33.28	35.11	36.99	38.91	40.89	6
7	26.10	27.70	29.36	31.06	32.82	34.62	36.47	38.37	40.32	42.32	7
8	27.36	28.99	30.67	32.39	34.17	36.00	37.88	39.80	41.78	43.80	8
9	28.67	30.32	32.02	33.78	35.58	37.43	39.33	41.28	43.28	45.33	9
10	30.02	31.70	33.43	35.21	37.04	38.91	40.84	42.81	44.84	46.91	10
11	31.43	33.13	34.89	36.69	38.55	40.44	42.40	44.40	46.44	48.55	11
12	32.89	34.62	36.39	38.22	40.10	42.02	44.00	46.02	48.10	50.22	12
13	34.39	36.15	37.95	39.80	41.70	43.65	45.65	47.70	49.80	51.95	13
14	35.95	37.73	39.55	41.43	43.36	45.33	47.36	49.43	51.55	53.73	14
15	37.55	39.36	41.21	43.11	45.06	47.06	49.11	51.21	53.36	55.55	15
16	39.21	41.04	42.91	44.84	46.81	48.84	50.91	53.04	55.21	57.43	16
17	40.91	42.76	44.67	46.62	48.62	50.67	52.76	54.91	57.11	59.36	17
18	42.67	44.54	46.47	48.44	50.47	52.54	54.67	56.84	59.06	61.33	18
19	44.47	46.37	48.32	50.32	52.37	54.47	56.62	58.81	61.06	63.36	19
20	46.32	48.25	50.22	52.25	54.32	56.44	58.62	60.84	62.11	65.43	20
21	48.22	50.17	52.17	54.22	56.32	58.47	60.67	62.91	65.21	67.55	21
22	50.17	52.15	54.17	56.25	58.37	60.54	62.76	65.04	67.36	69.73	22
23	52.17	54.17	56.22	58.32	60.47	62.67	64.91	67.21	69.55	71.95	23
24	54.22	56.25	58.32	60.44	62.62	64.84	67.11	69.43	71.80	74.22	24
25	56.32	58.37	60.47	62.62	64.81	67.06	69.36	71.70	74.10	76.55	25
26	58.47	60.54	62.67	64.84	67.06	69.33	71.65	74.02	76.44	78.91	26
27	60.67	62.76	64.91	67.11	69.36	71.65	74.00	76.40	78.84	81.33	27
28	62.91	65.04	67.21	69.43	71.70	74.02	76.40	78.81	81.28	83.80	28
29	65.21	67.36	69.55	71.80	74.10	76.44	78.84	81.28	83.78	86.32	29
30	67.55	69.73	71.95	74.22	76.55	78.91	81.33	83.80	86.32	88.89	30
31	69.95	72.15	74.39	76.69	79.04	81.43	83.88	86.37	88.91	91.51	31
32	72.39	74.62	76.89	79.21	81.58	84.00	86.47	88.99	91.56	94.18	32
33	74.89	77.13	79.43	81.78	84.17	86.62	89.11	91.65	94.25	96.89	33
34	77.43	79.70	82.02	84.39	86.82	89.28	91.80	94.37	96.99	99.65	34
35	80.02	82.32	84.66	87.06	89.51	92.00	94.54	97.13	99.78	102.47	35
36	82.67	84.99	87.36	89.78	92.25	94.77	97.33	99.95	102.62	105.33	36
37	85.36	87.70	90.10	92.54	95.04	97.58	100.17	102.81	105.51	108.25	37
38	88.10	90.47	92.89	95.36	97.88	100.44	103.06	105.73	108.44	111.21	38
39	90.89	93.28	95.73	98.22	100.76	103.36	106.00	108.69	111.43	114.22	39
40	93.73	96.15	98.62	101.13	103.70	106.32	108.99	111.70	114.47	117.28	40
41	96.62	99.06	101.55	104.10	106.69	109.33	112.02	114.76	117.55	120.39	41
42	99.55	102.02	104.54	107.11	109.73	112.40	115.11	117.88	120.69	123.55	42
43	102.54	105.04	107.58	110.17	112.81	115.51	118.25	121.04	123.88	126.76	43
44	105.58	108.10	110.67	113.28	115.95	118.67	121.43	124.25	127.11	130.02	44
45	108.67	111.21	113.80	116.44	119.13	121.88	124.66	127.51	130.39	133.33	45
46	111.80	114.37	116.99	119.65	122.37	125.13	127.95	130.81	133.73	136.69	46
47	114.99	117.58	120.22	122.91	125.65	128.66	131.28	134.17	137.11	140.10	47
48	118.22	120.84	123.50	126.22	128.99	131.80	134.67	137.58	140.54	143.55	48
49	121.51	124.15	126.84	129.58	132.37	135.21	138.10	141.04	144.02	147.06	49
50	124.84	127.51	130.22	132.99	135.80	138.67	141.58	144.54	147.55	150.62	50
	21	22	23	24	25	26	27	28	29	30	

TABLE X.—BASE 20—SLOPES 2 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	35.21	37.14	39.11	41.14	43.21	45.33	47.51	49.73	52.00	54.32	0
1	36.37	38.32	40.32	42.37	44.47	46.62	48.81	51.06	53.36	55.70	1
2	37.58	39.55	41.58	43.65	45.78	47.95	50.17	52.44	54.76	57.13	2
3	38.84	40.84	42.89	44.99	47.13	49.33	51.58	53.88	56.22	58.62	3
4	40.15	42.18	44.25	46.37	48.54	50.77	53.04	55.36	57.73	60.15	4
5	41.51	43.56	45.65	47.80	50.00	52.25	54.54	56.89	59.28	61.73	5
6	42.91	44.99	47.11	49.28	51.51	53.78	56.10	58.47	60.89	63.36	6
7	44.37	46.47	48.62	50.82	53.06	55.36	57.70	60.10	62.54	65.04	7
8	45.88	48.00	50.17	52.40	54.67	56.99	59.36	61.78	64.25	66.77	8
9	47.43	49.58	51.78	54.02	56.32	58.67	61.06	63.51	66.00	68.54	9
10	49.04	51.21	53.43	55.70	58.02	60.40	62.81	65.28	67.80	70.37	10
11	50.69	52.89	55.13	57.43	59.78	62.17	64.62	67.11	69.65	72.25	11
12	52.40	54.62	56.89	59.21	61.58	64.00	66.47	68.99	71.55	74.17	12
13	54.15	56.39	58.69	61.04	63.43	65.88	68.37	70.91	73.51	76.15	13
14	55.95	58.22	60.54	62.91	65.33	67.80	70.32	72.89	75.51	78.17	14
15	57.80	60.10	62.44	64.84	67.28	69.78	72.32	74.91	77.55	80.25	15
16	59.70	62.02	64.39	66.81	69.28	71.80	74.37	76.99	79.65	82.37	16
17	61.65	64.00	66.39	68.84	71.33	73.88	76.47	79.11	81.80	84.54	17
18	63.65	66.02	68.44	70.91	73.43	76.00	78.62	81.28	84.00	86.77	18
19	65.70	68.10	70.54	73.04	75.58	78.17	80.81	83.51	86.25	89.04	19
20	67.80	70.22	72.69	75.21	77.78	80.40	83.06	85.78	88.54	91.36	20
21	69.95	72.39	74.89	77.43	80.02	82.67	85.36	88.10	90.89	93.73	21
22	72.15	74.62	77.13	79.70	82.32	84.99	87.70	90.47	93.28	96.15	22
23	74.40	76.89	79.43	82.02	84.67	87.36	90.10	92 89	95.73	98.62	23
24	76.69	79.21	81.78	84.40	87.06	89.78	92.54	95.36	98.22	101.13	24
25	79.04	81.58	84.17	86.82	89.51	92.25	95.04	97.88	100.76	103.70	25
26	81.43	84.00	86.62	89.28	92.00	94.77	97.58	100.44	103.36	106.32	26
27	83.88	86.47	89.11	91.80	94.54	97.33	100.17	103.06	106.00	108.99	27
28	86.37	88.99	91.65	94.37	97.13	99.95	102.81	105.73	102.69	111.70	28
29	88.91	91.56	94.25	96.99	99.78	102.62	105.51	108.44	111.43	114.47	29
30	91.51	94.18	96.89	99.65	102.47	105.33	108.25	111.21	114.22	117.28	30
31	94.15	96.84	99.58	102.37	105.21	108.10	111.04	114.02	117.06	120.15	31
32	96.84	99.55	102.32	105.14	108.00	110.91	113.88	116.89	119.95	123.06	32
33	99.58	102.32	105.11	107.95	110.84	113.78	116.77	119.80	122.89	126.02	33
34	102.37	105.14	107.95	110.81	113.73	116.69	119.70	122.77	125.88	129.04	34
35	105.21	108.00	110.84	113.73	116.67	119.65	122.69	125.78	128.91	132.10	35
36	108.10	110.91	113.78	116.69	119.65	122.67	125.73	128.84	132.00	135.21	36
37	111.04	113.88	116.77	119.70	122.69	125.73	128.81	131.95	135.14	138.37	37
38	114.02	116.89	119.80	122.77	125.78	128.84	131.95	135.11	138.32	141.58	38
39	117.06	119.95	122.89	125.88	128.91	132.00	135.13	138.32	141.55	144.84	39
40	120.15	123.06	126.02	129.04	132.10	135.21	138.37	141.58	144.84	148.15	40
41	123.28	126.22	129.21	132.25	135.33	138.47	141.65	144.89	148.18	151.51	41
42	126.47	129.43	132.44	135.51	138.62	141.78	144.99	148.25	151.56	154.91	42
43	129.70	132.69	135.73	138.81	141.95	145.13	148.37	151.65	154.99	158.37	43
44	132.99	136.00	139.06	142.17	145.33	148.54	151.80	155.11	158.47	161.88	44
45	136.32	139.36	142.44	145.58	148.77	152.00	155.28	158.62	162.00	165.43	45
46	139.70	142.77	145.88	149.04	152.25	155.51	158.82	162.17	165.58	169.04	46
47	143.14	146.22	149.36	152.54	155.78	159.06	162.40	165.78	169.21	172.69	47
48	146.62	149.73	152.89	156.10	159.36	162.67	166.02	169.43	172.89	176.40	48
49	150.15	153.28	156.47	159.70	162.99	166.32	169.70	173.13	176.62	180.15	49
50	153.73	156.89	160.10	163.36	166.67	170.02	173.43	176.89	180.39	183.95	50
	31	32	33	34	35	36	37	38	39	40	

TABLE X.—BASE 20—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	56.69	59.11	62.58	64.10	66.67	69.28	71.95	74.67	77.43	80.25	0
1	58.10	60.54	63.04	65.58	68.17	70.81	73.51	76.25	79.04	81.88	1
2	59.55	62.02	64.54	67.11	69.73	72.39	75.11	77.88	80.69	83.55	2
3	61.06	63.55	66.10	68.69	71.33	74.02	76.77	79.55	82.39	85.28	3
4	62.62	65.13	67.70	70.32	72.99	75.70	78.47	81.28	84.15	87.06	4
5	64.22	66.77	69.36	72.00	74.69	77.43	80.22	83.06	85.95	88.89	5
6	65.88	68.44	71.06	73.73	76.44	79.21	82.02	84.89	87.80	90.76	6
7	67.58	70.17	72.81	75.51	78.25	81.04	83.88	86.76	89.70	92.69	7
8	69.33	71.95	74.62	77.33	80.10	82.91	85.78	88.69	91.65	94.67	8
9	71.15	73.78	76.47	79.21	82.00	84.84	87.73	90.67	93.65	96.69	9
10	72.99	75.65	78.37	81.13	83.95	86.81	89.73	92.69	95.70	98.76	10
11	74.89	77.58	80.32	83.11	85.95	88.84	91.78	94.77	97.80	100.89	11
12	76.84	79.55	82.32	85.13	88.00	90.91	93.88	96.89	99.95	103.06	12
13	78.84	81.58	84.37	87.21	90.10	93.04	96.02	99.06	102.15	105.28	13
14	80.89	83.65	86.47	89.33	92.25	95.21	98.22	101.28	104.39	107.55	14
15	82.99	85.78	88.62	91.51	94.44	97.43	100.47	103.55	106.69	109.88	15
16	85.13	87.95	90.81	93.73	96.69	99.70	102.76	105.88	109.04	112.25	16
17	87.33	90.17	93.06	96.00	98.99	102.02	105.11	108.25	111.43	114.67	17
18	89.58	92.44	95.36	98.32	101.33	104.39	107.51	110.67	113.88	117.14	18
19	91.88	94.77	97.70	100.69	103.73	106.81	109.95	113.14	116.37	119.65	19
20	94.22	97.13	100.10	103.11	106.17	109.28	112.44	115.65	118.91	122.22	20
21	96.62	99.55	102.54	105.58	108.67	111.80	114.99	118.22	121.51	124.84	21
22	99.06	102.02	105.04	108.10	111.21	114.37	117.58	120.84	124.15	127.51	22
23	101.55	104.54	107.58	110.68	113.80	116.99	120.22	123.51	126.84	130.22	23
24	104.10	107.11	110.17	113.28	116.44	119.65	122.91	126.22	129.58	132.99	24
25	106.69	109.73	112.81	115.95	119.14	122.37	125.65	128.99	132.37	135.80	25
26	109.33	112.40	115.51	118.67	121.88	125.13	128.44	131.80	135.21	138.67	26
27	112.02	115.11	118.25	121.43	124.66	127.95	131.28	134.67	138.10	141.58	27
28	114.76	117.88	121.04	124.25	127.51	130.81	134.17	137.58	141.04	144.54	28
29	117.56	120.69	123.88	127.11	130.40	133.73	137.11	140.54	144.02	147.56	29
30	120.40	123.56	126.77	130.02	133.33	136.69	140.10	143.56	147.06	150.62	30
31	123.28	126.47	129.70	132.99	136.32	139.70	143.14	146.62	150.15	153.73	31
32	126.22	129.43	132.69	136.00	139.36	142.77	146.22	149.73	153.28	156.89	32
33	129.21	132.44	135.73	139.06	142.44	145.88	149.36	152.89	156.47	160.10	33
34	132.25	135.51	138.81	142.17	145.58	149.04	152.54	156.10	159.70	163.36	34
35	135.33	138.62	141.95	145.33	148.77	152.25	155.78	159.36	162.99	166.67	35
36	138.47	141.78	145.13	148.54	152.00	155.51	159.06	162.67	166.32	170.02	36
37	141.65	144.99	148.37	151.80	155.28	158.82	162.40	166.02	169.70	173.43	37
38	144.89	148.25	151.65	155.11	158.62	162.17	165.78	169.43	173.13	176.89	38
39	148.18	151.56	154.99	158.47	162.00	165.58	169.21	172.89	176.62	180.39	39
40	151.51	154.91	158.37	161.88	165.43	169.04	172.69	176.40	180.15	183.95	40
41	154.89	158.32	161.80	165.33	168.91	172.54	176.22	179.95	183.73	187.55	41
42	158.32	161.78	165.28	168.84	172.44	176.10	179.80	183.55	187.36	191.21	42
43	161.80	165.28	168.81	172.39	176.02	179.70	183.43	187.21	191.04	194.91	43
44	165.33	168.84	172.39	176.00	179.65	183.36	187.11	190.91	194.76	198.67	44
45	168.91	172.44	176.02	179.65	183.33	187.06	190.84	194.67	198.54	202.47	45
46	172.54	176.10	179.70	183.36	187.06	190.81	194.62	198.47	202.37	206.32	46
47	176.22	179.80	183.43	187.11	190.84	194.62	198.44	202.32	206.25	210.22	47
48	179.95	183.55	187.21	190.91	194.67	198.47	202.32	206.22	210.17	214.17	48
49	183.73	187.36	191.04	194.76	198.54	202.37	206.25	210.17	214.15	218.17	49
50	187.55	191.21	194.91	198.67	202.47	206.32	210.22	214.17	218.17	222.22	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XI.—BASE 30—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.58	1.21	1.89	2.62	3.40	4.22	5.10	6.02	7.00	8.02	0
1	1.18	1.84	2.54	3.30	4.10	4.95	5.85	6.80	7.80	8.85	1
2	1.84	2.52	3.25	4.02	4.85	5.73	6.65	7.63	8.65	9.73	2
3	2.54	3.25	4.00	4.80	5.65	6.55	7.51	8.51	9.55	10.65	3
4	3.30	4.02	4.80	5.63	6.51	7.43	8.41	9.43	10.51	11.63	4
5	4.10	4.85	5.65	6.51	7.41	8.36	9.36	10.41	11.51	12.65	5
6	4.95	5.73	6.55	7.43	8.36	9.33	10.36	11.43	12.55	13.73	6
7	5.85	6.65	7.51	8.41	9.36	10.36	11.41	12.51	13.65	14.85	7
8	6.80	7.63	8.51	9.43	10.41	11.43	12.51	13.63	14.80	16.02	8
9	7.80	8.65	9.55	10.51	11.51	12.55	13.65	14.80	16.00	17.25	9
10	8.85	9.73	10.65	11.63	12.65	13.73	14.85	16.02	17.25	18.52	10
11	9.95	10.85	11.80	12.80	13.85	14.95	16.10	17.29	18.54	19.84	11
12	11.10	12.02	13.00	14.02	15.10	16.22	17.39	18.62	19.89	21.21	12
13	12.30	13.25	14.25	15.30	16.40	17.54	18.74	19.99	21.28	22.63	13
14	13.54	14.52	15.54	16.62	17.74	18.91	20.13	21.41	22.73	24.10	14
15	14.84	15.84	16.89	17.99	19.13	20.33	21.58	22.88	24.22	25.62	15
16	16.18	17.21	18.28	19.41	20.58	21.80	23.07	24.39	25.76	27.18	16
17	17.58	18.63	19.73	20.88	22.07	23.32	24.62	25.96	27.36	28.80	17
18	19.02	20.10	21.22	22.39	23.62	24.89	26.21	27.58	29.00	30.47	18
19	20.52	21.62	22.76	23.96	25.21	26.51	27.85	29.25	30.69	32.18	19
20	22.06	23.18	24.36	25.58	26.85	28.17	29.54	30.96	32.43	33.95	20
21	23.65	24.80	26.00	27.25	28.54	29.89	31.28	32.73	34.22	35.76	21
22	25.30	26.47	27.69	28.96	30.28	31.65	33.07	34.54	36.06	37.62	22
23	26.99	28.18	29.43	30.73	32.07	33.47	34.91	36.41	37.95	39.54	23
24	28.73	29.95	31.22	32.54	33.91	35.33	36.80	38.32	39.89	41.51	24
25	30.52	31.76	33.06	34.41	35.80	37.25	38.74	40.28	41.88	43.52	25
26	32.36	33.63	34.95	36.32	37.74	39.21	40.73	42.30	43.91	45.58	26
27	34.25	35.54	36.89	38.28	39.73	41.22	42.76	44.36	46.00	47.69	27
28	36.18	37.51	38.88	40.30	41.76	43.28	44.85	46.47	48.13	49.85	28
29	38.17	39.52	40.91	42.36	43.85	45.39	46.99	48.63	50.32	52.06	29
30	40.21	41.58	43.00	44.47	45.99	47.55	49.17	50.84	52.55	54.32	30
31	42.30	43.69	45.13	46.63	48.17	49.76	51.41	53.10	54.84	56.63	31
32	44.43	45.85	47.32	48.84	50.41	52.02	53.69	55.41	57.17	58.99	32
33	46.62	48.06	49.55	51.10	52.69	54.33	56.02	57.76	59.55	61.39	33
34	48.85	50.32	51.84	53.41	55.02	56.69	58.41	60.17	61.99	63.85	34
35	51.13	52.63	54.17	55.76	57.41	59.10	60.84	62.63	64.47	66.36	35
36	53.47	54.99	56.55	58.17	59.84	61.55	63.32	65.13	67.00	68.91	36
37	55.85	57.39	58.99	60.63	62.32	64.06	65.85	67.69	69.58	71.52	37
38	58.28	59.85	61.47	63.13	64.85	66.62	68.43	70.30	72.21	74.17	38
39	60.76	62.36	64.00	65.69	67.43	69.22	71.06	72.95	74.89	76.88	39
40	63.30	64.91	66.58	68.29	70.06	71.88	73.74	75.65	77.62	79.63	40
41	65.88	67.52	69.21	70.95	72.74	74.58	76.47	78.41	80.40	82.43	41
42	68.51	70.17	71.89	73.65	75.47	77.33	79.25	81.21	83.22	85.28	42
43	71.18	72.88	74.62	76.41	78.25	80.14	82.07	84.06	86.10	88.18	43
44	73.91	75.63	77.39	79.21	81.07	82.99	84.95	86.96	89.02	91.14	44
45	76.69	78.43	80.22	82.06	83.95	85.89	87.88	89.91	92.00	94.14	45
46	79.52	81.28	83.10	84.96	86.88	88.84	90.85	92.91	95.02	97.18	46
47	82.39	84.19	86.02	87.91	89.85	91.84	93.88	95.96	98.10	100.28	47
48	85.32	87.14	89.00	90.91	92.88	94.89	96.95	99.06	101.22	103.43	48
49	88.30	90.14	92.02	93.96	95.95	97.99	100.07	102.21	104.40	106.63	49
50	91.32	93.19	95.10	97.06	99.07	101.14	103.25	105.41	107.62	109.88	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XI.—BASE 30—SLOPES 2 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.10	10.22	11.40	12.62	13.89	15.21	16.58	18.00	19.47	20.99	0
1	9.95	11.10	12.30	13.54	14.84	16.18	17.58	19.02	20.52	22.06	1
2	10.85	12.02	13.25	14.52	15.84	17.21	18.63	20.10	21.62	23.18	2
3	11.80	13.00	14.25	15.54	16.89	18.28	19.73	21.22	22.76	24.36	3
4	12.80	14.02	15.30	16.62	17.99	19.41	20.88	22.39	23.96	25.58	4
5	13.85	15.10	16.40	17.74	19.13	20.58	22.07	23.62	25.21	26.85	5
6	14.95	16.22	17.54	18.91	20.33	21.80	23.32	24.89	26.51	28.17	6
7	16.10	17.39	18.74	20.13	21.58	23.07	24.62	26.21	27.85	29.54	7
8	17.29	18.62	19.99	21.41	22.88	24.39	25.96	27.58	29.25	30.96	8
9	18.54	19.89	21.28	22.73	24.22	25.76	27.36	29.00	30.69	32.43	9
10	19.84	21.21	22.63	24.10	25.62	27.18	28.80	30.47	32.18	33.95	10
11	21.18	22.58	24.02	25.52	27.06	28.65	30.30	31.99	33.73	35.52	11
12	22.58	24.00	25.47	26.99	28.55	30.17	31.84	33.55	35.32	37.13	12
13	24.02	25.47	26.96	28.51	30.10	31.74	33.43	35.17	36.96	38.80	13
14	25.52	26.99	28.51	30.07	31.69	33.36	35.07	36.84	38.65	40.52	14
15	27.06	28.55	30.10	31.69	33.33	35.02	36.76	38.55	40.39	42.28	15
16	28.65	30.17	31.74	33.36	35.02	36.74	38.51	40.32	42.18	44.10	16
17	30.30	31.84	33.43	35.07	36.76	38.51	40.30	42.13	44.92	45.96	17
18	31.99	33.55	35.17	36.84	38.55	40.32	42.13	44.00	45.91	47.88	18
19	33.73	35.32	36.96	38.65	40.39	42.18	44.92	45.91	47.85	49.84	19
20	35.52	37.13	38.80	40.52	42.28	44.10	45.96	47.88	49.84	51.85	20
21	37.36	39.00	40.69	42.43	44.22	46.06	47.95	49.89	51.88	53.91	21
22	39.25	40.91	42.63	44.39	46.21	48.07	49.99	51.95	53.96	56.02	22
23	41.18	42.88	44.62	46.41	48.25	50.13	52.07	54.06	56.10	58.18	23
24	43.17	44.89	46.65	48.47	50.33	52.25	54.21	56.22	58.28	60.39	24
25	45.21	46.95	48.74	50.58	52.47	54.41	56.39	58.43	60.52	62.65	25
26	47.30	49.06	50.88	52.74	54.65	56.62	58.63	60.69	62.80	64.96	26
27	49.43	51.22	53.06	54.95	56.89	58.87	60.91	63.00	65.13	67.32	27
28	51.62	53 43	55.30	57.21	59.17	61.18	63.25	65.36	67.52	69.73	28
29	53.85	55.69	57.58	59.52	61.51	63.54	65.63	67.76	69.95	72.18	29
30	56.13	58.00	59.91	61.88	63.89	65.95	68.06	70.22	72.43	74.69	30
31	58.47	60.36	62.30	64.28	66.32	68.41	70.54	72.73	74.96	77.25	31
32	60.85	62.76	64.73	66.74	68.80	70.91	73.07	75.28	77.54	79.85	32
33	63.28	65.22	67.21	69.25	71.33	73.47	75.65	77.89	80.17	82.51	33
34	65.76	67.73	69.74	71.80	73.91	76.07	78.28	80.54	82.85	85.21	34
35	68.30	70.28	72.32	74.41	76.54	78.73	80.96	83.25	85.58	87.96	35
36	70.88	72.89	74.95	77.06	79.22	81.43	83.69	86.00	88.36	90.76	36
37	73.51	75.54	77.63	79.76	81.95	84.18	86.47	88.80	91.18	93.62	37
38	76.18	78.25	80.36	82.52	84.73	86.99	89.30	91.65	94.06	96.52	38
39	78.91	81.00	83.13	85.32	87.55	89.84	92.17	94.55	96.99	99.47	39
40	81.69	83.80	85.96	88.17	90.43	92.74	95.10	97.51	99.96	102.47	40
41	84.52	86.65	88.84	91.07	93.36	95.69	98.07	100.51	102.99	106.52	41
42	87.39	89.55	91.76	94.02	96.33	98.69	101.10	103.55	106.06	108.62	42
43	90.32	92.51	94.74	97.02	99.36	101.74	104.17	107.65	109.18	111.76	43
44	93.29	95.51	97.76	100.07	102.43	104.84	107.30	109.80	112.36	114.96	44
45	96.32	98.55	100.84	103.17	105.55	108.99	110.47	113.00	115.58	118.21	45
46	99.39	101.65	103.96	106.32	109.73	111.18	113.69	116.25	118.85	121.51	46
47	102.52	104.80	107.13	110.52	111.95	114.43	116.96	119.54	122.17	124.85	47
48	105.69	108.00	110.36	112.76	115.22	117.73	120.28	122.89	125.54	128.25	48
49	108.91	111.25	113.63	116.06	118.54	121.07	123.65	126.28	128.96	131.69	49
50	112.18	114.54	116.95	119.41	121.91	124.47	127.07	129.73	132.43	135.18	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XI.—BASE 30—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	22.56	24.17	25.84	27.56	29.32	31.14	33.00	34.91	36.88	38.89	0
1	23.65	25.30	26.99	28.73	30.52	32.36	34.25	36.18	38.17	40.21	1
2	24.80	26.47	28.18	29.95	31.76	33.63	35.54	37.51	39.52	41.58	2
3	26.00	27.69	29.43	31.22	33.06	34.95	36.89	38.88	40.91	43.00	3
4	27.25	28.96	30.73	32.54	34.41	36.32	38.28	40.30	42.36	44.47	4
5	28.54	30.28	32.07	33.91	35.80	37.74	39.73	41.76	43.85	45.99	5
6	29.89	31.65	33.47	35.33	37.25	39.21	41.22	43.28	45.39	47.55	6
7	31.28	33.07	34.91	36.80	38.74	40.73	42.76	44.85	46.99	49.17	7
8	32.73	34.54	36.41	38.32	40.28	42.30	44.36	46.47	48.63	50.84	8
9	34.22	36.06	37.95	39.89	41.88	43.91	46.00	48.13	50.32	52.55	9
10	35.76	37.62	39.54	41.51	43.52	45.58	47.69	49.85	52.06	54.32	10
11	37.36	39.25	41.18	43.17	45.21	47.30	49.43	51.62	53.85	56.13	11
12	39.00	40.91	42.88	44.89	46.95	49.06	51.22	53.43	55.69	58.00	12
13	40.69	42.63	44.62	46.65	48.74	50.88	53.06	55.30	57.58	59.91	13
14	42.43	44.39	46.41	48.47	50.58	52.74	54.95	57.21	59.52	61.88	14
15	44.22	46.21	48.25	50.33	52.47	54.65	56.89	59.17	61.51	63.89	15
16	46.06	48.07	50.13	52.25	54.41	56.62	58.87	61.18	63.54	65.95	16
17	47.95	49.99	52.07	54.21	56.39	58.63	60.91	63.25	65.63	68.06	17
18	49.89	51.95	54.06	56.22	58.43	60.69	63.00	65.36	67.76	70.22	18
19	51.88	53.96	56.10	58.28	60.52	62.80	65.13	67.52	69.95	72.43	19
20	53.91	56.02	58.18	60.39	62.65	64.96	67.32	69.73	72.18	74.69	20
21	56.00	58.13	60.32	62.55	64.84	67.17	69.55	71.99	74.47	77.00	21
22	58.13	60.30	62.51	64.76	67.07	69.43	71.84	74.30	76.80	79.36	22
23	60.32	62.51	64.74	67.02	69.36	71.74	74.17	76.65	79.18	81.76	23
24	62.55	64.76	67.02	69.33	71.69	74.10	76.55	79.06	81.62	84.22	24
25	64.84	67.07	69.36	71.69	74.07	76.51	78.99	81.52	84.10	86.73	25
26	67.17	69.43	71.74	74.10	76.51	78.96	81.47	84.02	86.63	89.28	26
27	69.55	71.84	74.17	76.55	78.99	81.47	84.00	86.58	89.21	91.89	27
28	71.99	74.30	76.65	79.06	81.52	84.02	86.58	89.18	91.84	94.54	28
29	74.47	76.80	79.18	81.62	84.10	86.63	89.21	91.84	94.52	97.25	29
30	77.00	79.36	81.76	84.22	86.73	89.28	91.89	94.54	97.25	100.00	30
31	79.58	81.96	84.39	86.88	89.41	91.99	94.62	97.30	100.02	102.80	31
32	82.21	84.62	87.07	89.58	92.13	94.74	97.40	100.10	102.85	105.65	32
33	84.89	87.32	89.80	92.33	94.91	97.54	100.22	102.95	105.73	108.55	33
34	87.62	90.07	92.58	95.13	97.74	100.39	103.10	105.85	108.65	111.51	34
35	90.40	92.88	95.41	97.99	100.62	103.30	106.02	108.80	111.63	114.51	35
36	93.22	95.73	98.28	100.89	103.54	106.25	109.00	111.80	114.65	117.55	36
37	96.10	98.63	101.21	103.84	106.52	109.25	112.02	114.85	117.73	120.65	37
38	99.02	101.58	103.18	106.84	109.54	112.30	115.10	117.95	120.85	123.80	38
39	102.00	104.58	107.21	109.89	112.62	115.39	118.22	121.10	124.02	127.00	39
40	105.02	107.63	110.28	112.99	115.74	118.54	121.40	124.30	127.25	130.25	40
41	108.10	110.73	113.41	116.13	118.91	121.74	124.62	127.54	130.52	133.54	41
42	111.22	113.88	116.58	119.33	122.13	124.99	127.89	130.84	133.84	136.89	42
43	114.40	117.07	119.80	122.58	125.41	128.28	131.21	134.18	137.21	140.28	43
44	117.62	120.32	123.07	125.88	128.73	131.63	134.58	137.58	140.63	143.73	44
45	120.89	123.62	126.39	129.22	132.10	135.02	138.00	141.02	144.10	147.22	45
46	124.21	126.96	129.76	132.62	135.52	138.47	141.47	144.52	147.62	150.76	46
47	127.58	130.36	133.18	136.06	138.99	141.96	144.99	148.06	151.18	154.36	47
48	131.00	133.80	136.65	139.55	142.51	145.51	148.55	151.65	154.80	158.00	48
49	134.47	137.30	140.17	143.10	146.07	149.10	152.17	155.30	158.47	161.69	49
50	137.99	140.84	143.74	146.69	149.69	152.74	155.84	158.99	162.18	165.43	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XI.—BASE 30—SLOPES 2 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	40.95	43.06	45.22	47.43	49.69	52.00	54.36	56.77	59.22	61.73	0
1	42.30	44.43	46.62	48.85	51.13	53.47	55.85	58.28	60.76	63.30	1
2	43.69	45.85	48.06	50.32	52.63	54.99	57.39	59.85	62.36	64.91	2
3	45.13	47.32	49.55	51.84	54.17	56.55	58.99	61.47	64.00	66.58	3
4	46.63	48.84	51.10	53.41	55.76	58.17	60.63	63.13	65.69	68.29	4
5	48.17	50.41	52.69	55.02	57.41	59.84	62.32	64.85	67.43	70.06	5
6	49.76	52.02	54.33	56.69	59.10	61.55	64.06	66.62	69.22	71.88	6
7	51.40	53.69	56.02	58.41	60.84	63.32	65.85	68.43	71.06	73.74	7
8	53.10	55.41	57.76	60.17	62.63	65.13	67.69	70.30	72.95	75.65	8
9	54.84	57.17	59.55	61.99	64.47	67.00	69.58	72.21	74.89	77.62	9
10	56.63	58.99	61.39	63.85	66.36	68.91	71.52	74.17	76.88	79.63	10
11	58.47	60.85	63.28	65.76	68.30	70.88	73.51	76.18	78.91	81.69	11
12	60.36	62.76	65.22	67.73	70.28	72.89	75.54	78.25	81.00	83.80	12
13	62.30	64.73	67.21	69.74	72.32	74.95	77.63	80.36	83.13	85.96	13
14	64.28	66.74	69.25	71.80	74.41	77.06	79.76	82.52	85.32	88.17	14
15	66.32	68.80	71.33	73.91	76.54	79.22	81.95	84.73	87.55	90.43	15
16	68.41	70.91	73.47	76.07	78.73	81.43	84.18	86.99	89.84	92.74	16
17	70.54	73.07	75.65	78 28	80.96	83.69	86.47	89.30	92.17	95.10	17
18	72.73	75.28	77.89	80.54	83.25	86.00	88.80	91.65	94.55	97.51	18
19	74.96	77.54	80.17	82.85	85.58	88.36	91.18	94.06	96.99	99.96	19
20	77.25	79.85	82.51	85.21	87.96	90.76	93.62	96.52	99.47	102.47	20
21	79.58	82.21	84.89	87.62	90.40	93.22	96.10	99.02	102.00	105.02	21
22	81.96	84.62	87.32	90.07	92.88	95.73	98.63	101.58	104.58	107.63	22
23	84.39	87.07	89.80	92.58	95.41	98.28	101.21	103.18	107.21	110.28	23
24	86.88	89.58	92.33	95.13	97.99	100.89	103.84	106.84	109.89	112.99	24
25	89.41	92.13	94.91	97.74	100.62	103.54	106.52	109.54	112.62	115.74	25
26	91.99	94.74	97.54	100.39	103.30	106.25	109.25	112.30	115.39	118.54	26
27	94.62	97.40	100.22	103.10	106.02	109.00	112.02	115.10	118.22	121.40	27
28	97.30	100.10	102.95	105.85	108.80	111.80	114.85	117.95	121.10	124.30	28
29	100.02	102.85	105.73	108.65	111.63	114.65	117.73	120.85	124.02	127.25	29
30	102.80	105.65	108.55	111.51	114.51	117.55	120.65	123.80	127.00	130.25	30
31	105.63	108.51	111.43	114.41	117.43	120.51	123.63	126.80	130.02	133.30	31
32	108.51	111.41	114.36	117.36	120.41	123.51	126.65	129.85	133.10	136.39	32
33	111.43	114.36	117.33	120.36	123.43	126.55	129.73	132.95	136.22	139.54	33
34	114.41	117.36	120.36	123.41	126.51	129.65	132.85	136.10	139.39	142.74	34
35	117.43	120.41	123.43	126.51	129.63	132.80	136.02	139.30	142.62	145.99	35
36	120.51	123.51	126.55	129.65	132.80	136.00	139.25	142.54	145.89	149.28	36
37	123.63	126.65	129.73	132.85	136.02	139.25	142.52	145.84	149.21	152.63	37
38	126.80	129.85	132.95	136.10	139.30	142.54	145.84	149.18	152.58	156.02	38
39	130.02	133.10	136.22	139.39	142.62	145.89	149.21	152.58	156.00	159.47	39
40	133.30	136.39	139.54	142.74	145.99	149.28	152.63	156.02	159.47	163.96	40
41	136.62	139.74	142.91	146.13	149.41	152.73	156.10	159.52	163.99	166.51	41
42	139.99	143.13	146.33	149.58	152.88	156.22	159.62	163.06	166.55	170.10	42
43	143.41	146.58	149.80	153.07	156.40	159.76	163.18	166.65	170.17	173.74	43
44	146.88	150.07	153.32	156.62	159.96	163.36	166.80	170.30	173.84	177.43	44
45	150.39	153.62	156.89	160.21	163.58	167.00	170.47	173.99	177.55	181.17	45
46	153.96	157.21	160.51	163.85	167.25	170.69	174.18	177.73	181.32	184.96	46
47	157.58	160.85	164.17	167.54	170.96	174.43	177.95	181.52	185.13	188.80	47
48	161.25	164.54	167.89	171.28	174.73	178.22	181.76	185.36	189.00	192.69	48
49	164.96	168.28	171.65	175.07	178.54	182.06	185.63	189.25	192.91	196.63	49
50	168.73	172.07	175.47	178.91	182.41	185.95	189.54	193.18	196.88	200.62	50
—	31	32	33	34	35	36	37	38	39	40	—

TABLE XI.—BASE 30—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	64.28	66.89	69.54	72.25	75.00	77.80	80.65	83.55	86.51	89.49	0
1	65.88	68.51	71.18	73.91	76.69	79.52	82.39	85.32	88.30	91.32	1
2	67.52	70.17	72.88	75.63	78.43	81.28	84.19	87.14	90.14	93.19	2
3	69.21	71.89	74.62	77.39	80.22	83.10	86.02	89.00	92.02	95.10	3
4	70.95	73.65	76.41	79.21	82.06	84.96	87.91	90.91	93.96	97.06	4
5	72.74	75.47	78.25	81.07	83.95	86.88	89.85	92.88	95.95	99.07	5
6	74.58	77.33	80.14	82.99	85.89	88.84	91.84	94.89	97.99	101.14	6
7	76.47	79.25	82.07	84.95	87.88	90.85	93.88	96.95	100.07	103.25	7
8	78.41	81.21	84.06	86.96	89.91	92.91	95.96	99.06	102.21	105.41	8
9	80.40	83.22	86.10	89.02	92.00	95.02	98.10	101.22	104.40	107.62	9
10	82.43	85.28	88.18	91.14	94.14	97.18	100.28	103.43	106.63	109.88	10
11	84.52	87.40	90.32	93.30	96.32	99.40	102.52	105.69	108.91	112.18	11
12	86.65	89.55	92.51	95.51	98.55	101.65	104.80	108.00	111.25	114.54	12
13	88.84	91.77	94.74	97.77	100.84	103.96	107.13	110.36	113.63	116.95	13
14	91.07	94.02	97.02	100.07	103.17	106.32	110.52	112.76	116.06	119.41	14
15	93.36	96.33	99.36	102.43	105.55	109.73	111.95	115.22	118.54	121.91	15
16	95.69	98.69	101.74	104.84	108.99	111.18	114.43	117.73	121.07	124.47	16
17	98.07	101.10	104.17	107.30	110.47	113.69	116.96	120.28	123.65	127.07	17
18	100.51	103.55	107.65	109.80	113.00	116.25	119.54	122.89	126.28	129.73	18
19	102.99	106.06	109.18	112.36	115.58	118.85	122.17	125.54	128.96	132.43	19
20	106.52	108.62	111.76	114.96	118.21	121.51	124.85	128.25	131.69	135.18	20
21	108.10	111.22	114.40	117.62	120.89	124.21	127.58	131.00	134.47	137.99	21
22	110.73	113.88	117.07	120.32	123.62	126.96	130.36	133.80	137.30	140.84	22
23	113.41	116.58	119.80	123.07	126.39	129.76	133.18	136.65	140.17	143.74	23
24	116.13	119.33	122.58	125.88	129.22	132.62	136.06	139.55	143.10	146.69	24
25	118.91	122.13	125.41	128.73	132.10	135.52	138.99	142.51	146.07	149.69	25
26	121.74	124.99	128.28	131.63	135.02	138.47	141.96	145.51	149.10	152.74	26
27	124.62	127.89	131.21	134.58	138.00	141.47	144.99	148.55	152.17	155.84	27
28	127.54	130.84	134.18	137.58	141.02	144.52	148.06	151.65	155.30	158.99	28
29	130.52	133.84	137.21	140.63	144.10	147.62	151.18	154.80	158.47	162.18	29
30	133.54	136.89	140.28	143.73	147.22	150.76	154.36	158.00	161.69	165.43	30
31	136.62	139.99	143.41	146.88	150.39	153.96	157.58	161.25	164.96	168.73	31
32	139.74	143.13	146.58	150.07	153.62	157.21	160.85	164.54	168.28	172.07	32
33	142.91	146.33	149.80	153.32	156.89	160.51	164.17	167.89	171.65	175.47	33
34	146.13	149.58	153.07	156.62	160.21	163.85	167.54	171.28	175.07	178.91	34
35	149.41	152.88	156.40	159.96	163.58	167.25	170.96	174.73	178.54	182.41	35
36	152.73	156.22	159.76	163.36	167.00	170.69	174.43	178.22	182.06	185.95	36
37	156.10	159.62	163.18	166.80	170.47	174.18	177.95	181.76	185.63	189.54	37
38	159.52	163.06	166.65	170.30	173.99	177.73	181.52	185.36	189.25	193.18	38
39	163.99	166.55	170.17	173.84	177.55	181.32	185.13	189.00	192.91	196.88	39
40	166.51	170.10	173.74	177.43	181.17	184.96	188.80	192.69	196.63	200.62	40
41	170.07	173.69	177.36	181.07	184.84	188.65	192.52	196.43	200.40	204.41	41
42	173.69	177.33	181.02	184.77	188.55	192.40	196.28	200.22	204.21	208.25	42
43	177.36	181.02	184.74	188.51	192.32	196.18	200.10	204.06	208.07	212.14	43
44	181.07	184.77	188.51	192.30	196.14	200.02	203.96	207.95	211.99	216.07	44
45	184.84	188.55	192.32	196.14	200.00	203.91	207.88	211.89	215.95	220.06	45
46	188.65	192.40	196.18	200.02	203.91	207.85	211.84	215.88	219.96	224.10	46
47	192.52	196.28	200.10	203.96	207.88	211.84	215.85	219.91	225.02	228.19	47
48	196.43	200.22	204.06	207.95	211.89	215.88	219.91	224.00	228.14	232.32	48
49	200.40	204.21	208.07	211.99	215.95	219.96	225.02	228.14	232.30	236.49	49
50	204.41	208.25	212.14	216.07	220.06	224.10	228.19	232.32	236.51	240.70	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XII.—BASE 36—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.69	1.43	2.22	3.06	3.95	4.89	5.88	6.91	8.00	9.14	0
1	1.41	2.17	2.99	3.85	4.77	5.73	6.74	7.80	8.91	10.07	1
2	2.17	2.96	3.80	4.69	5.63	6.62	7.65	8.74	9.88	11.06	2
3	2.99	3.80	4.67	5.58	6.54	7.56	8.62	9.73	10.89	12.10	3
4	3.85	4.69	5.58	6.52	7.51	8.54	9.63	10.77	11.95	13.19	4
5	4.77	5.63	6.54	7.51	8.52	9.58	10.69	11.85	13.06	14.32	5
6	5.73	6.62	7.56	8.54	9.58	10.67	11.80	12.99	14.22	15.51	6
7	6.74	7.65	8.62	9.63	10.69	11.80	12.96	14.17	15.43	16.74	7
8	7.80	8.74	9.73	10.77	11.85	12.99	14.17	15.41	16.69	18.02	8
9	8.91	9.88	10.89	11.95	13.06	14.22	15.43	16.69	18.00	19.36	9
10	10.07	11.06	12.10	13.19	14.32	15.51	16.74	18.02	19.36	20.74	10
11	11.28	12.30	13.36	14.47	15.63	16.84	18.10	19.41	20.77	22.17	11
12	12.54	13.58	14.67	15.80	16.99	18.22	19.51	20.84	22.22	23.65	12
13	13.85	14.91	16.02	17.19	18.40	19.65	20.96	22.32	23.73	25.19	13
14	15.21	16.30	17.43	18.62	19.85	21.14	22.47	23.85	25.28	26.77	14
15	16.62	17.73	18.89	20.10	21.36	22.67	24.02	25.43	26.89	28.40	15
16	18.07	19.21	20.40	21.63	22.91	24.25	25.63	27.06	28.54	30.07	16
17	19.58	20.74	21.95	23.21	24.52	25.88	27.28	28.74	30.25	31.80	17
18	21.15	22.32	23.56	24.84	26.17	27.56	28.99	30.47	32.00	33.58	18
19	22.74	23.95	25.21	26.52	27.88	29.28	30.74	32.25	33.80	35.41	19
20	24.40	25.63	26.91	28.25	29.63	31.06	32.54	34.07	35.65	37.26	20
21	26.10	27.36	28.67	30.02	31.43	32.89	34.40	35.95	37.56	39.21	21
22	27.85	29.14	30.47	31.85	33.28	34.77	36.30	37.88	39.51	41.19	22
23	29.65	30.96	32.32	33.73	35.19	36.69	38.25	39.85	41.51	43.21	23
24	31.51	32.84	34.22	35.65	37.14	38.67	40.25	41.88	43.56	45.28	24
25	33.41	34.77	36.17	37.63	39.14	40.69	42.30	43.95	45.65	47.41	25
26	35.36	36.74	38.17	39.65	41.19	42.77	44.40	46.07	47.80	49.58	26
27	37.36	38.77	40.22	41.73	43.28	44.89	46.54	48.25	50.00	51.80	27
28	39.41	40.84	42.32	43.85	45.43	47.06	48.74	50.47	52.25	54.07	28
29	41.51	42.96	44.47	46.02	47.63	49.28	50.99	52.74	54.54	56.40	29
30	43.65	45.14	46.67	48.25	49.88	51.56	53.28	55.06	56.89	58.77	30
31	45.85	47.36	48.91	50.52	52.17	53.88	55.63	57.43	59.28	61.19	31
32	48.10	49.63	51.21	52.84	54.52	56.25	58.02	59.85	61.73	63.65	32
33	50.40	51.95	53.56	55.21	56.91	58.67	60.47	62.32	64.22	66.17	33
34	52.74	54.32	55.95	57.63	59.36	61.14	62.96	64.84	66.77	68.74	34
35	55.15	56.74	58.40	60.10	61.85	63.65	65.51	67.41	69.36	71.36	35
36	57.58	59.21	60.89	62.62	64.40	66.22	68.10	70.02	72.00	74.02	36
37	60.07	61.73	63.43	65.19	66.99	68.84	70.74	72.69	74.69	76.74	37
38	62.62	64.30	66.02	67.80	69.63	71.51	73.43	75.41	77.43	79.51	38
39	65.21	66.91	68.67	70.47	72.32	74.22	76.17	78.17	80.22	82.32	39
40	67.85	69.58	71.36	73.19	75.06	76.99	78.96	80.99	83.06	85.19	40
41	70.54	72.30	74.10	75.95	77.85	79.80	81.80	83.85	85.95	88.10	41
42	73.28	75.06	76.89	78.77	80.69	82.67	84.69	86.77	88.89	91.06	42
43	76.07	77.88	79.73	81.63	83.58	85.58	87.63	89.73	91.88	94.07	43
44	78.91	80.74	82.62	84.54	86.52	88.54	90.62	92.74	94.91	97.14	44
45	81.80	83.65	85.56	87.51	89.51	91.56	93.65	95.80	98.00	100.25	45
46	84.74	86.62	88.54	90.52	92.54	94.62	96.74	98.91	101.14	103.41	46
47	87.73	89.63	91.58	93.58	95.63	97.73	99.88	102.07	104.32	106.62	47
48	90.77	92.69	94.67	96.69	98.77	100.89	103.06	105.28	107.56	109.88	48
49	93.85	95.80	97.80	99.85	101.95	104.10	106.30	108.54	110.84	113.19	49
50	96.99	98.96	100.99	103.06	105.19	107.36	109.58	111.85	114.17	116.54	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XII.—BASE 36—SLOPES 2 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	10.32	11.56	12.84	14.17	15.56	16.99	18.47	20.00	21.58	23.21	0
1	11.28	12.54	13.85	15.21	16.62	18.07	19.58	21.15	22.74	24.40	1
2	12.30	13.58	14.91	16.30	17.73	19.21	20.74	22.32	23.95	25.63	2
3	13.36	14.67	16.02	17.43	18.89	20.40	21.95	23.56	25.21	26.91	3
4	14.47	15.80	17.19	18.62	20.10	21.63	23.21	24.84	26.52	28.25	4
5	15.63	16.99	18.40	19.85	21.36	22.91	24.52	26.17	27.88	29.63	5
6	16.84	18.22	19.65	21.14	22.67	24.25	25.88	27.56	29.28	31.06	6
7	18.10	19.51	20.96	22.47	24.02	25.63	27.28	28.99	30.74	32.54	7
8	19.41	20.84	22.32	23.85	25.43	27.06	28.74	30.47	32.25	34.07	8
9	20.77	22.22	23.73	25.28	26.89	28.54	30.25	32.00	33.80	35.65	9
10	22.17	23.65	25.19	26.77	28.40	30.07	31.80	33.58	35.41	37.28	10
11	23.63	25.14	26.69	28.30	29.95	31.65	33.41	35.21	37.06	38.96	11
12	25.14	26.67	28.25	29.88	31.56	33.28	35.06	36.89	38.77	40.69	12
13	26.69	28.25	29.85	31.51	33.21	34.96	36.77	38.62	40.52	42.47	13
14	28.30	29.88	31.51	33.19	34.91	36.69	38.52	40.40	42.32	44.30	14
15	29.95	31.56	33.21	34.91	36.67	38.47	40.32	42.22	44.17	46.17	15
16	31.65	33.28	34.96	36.69	38.47	40.30	42.17	44.10	46.07	48.10	16
17	33.41	35.06	36.77	38.52	40.32	42.17	44.07	46.02	48.02	50.07	17
18	35.21	36.89	38.62	40.40	42.22	44.10	46.02	48.00	50.02	52.10	18
19	37.06	38.77	40.52	42.32	44.17	46.07	48.02	50.02	52.07	54.17	19
20	38.96	40.69	42.47	44.30	46.17	48.10	50.07	52.10	54.17	56.30	20
21	40.91	42.67	44.47	46.32	48.22	50.17	52.17	54.22	56.32	58.47	21
22	42.91	44.69	46.52	48.40	50.32	52.30	54.32	56.40	58.52	60.69	22
23	44.96	46.77	48.62	50.52	52.47	54.47	56.52	58.62	60.77	62.96	23
24	47.06	48.89	50.77	52.69	54.67	56.69	58.77	60.89	63.06	65.28	24
25	49.21	51.06	52.96	54 91	56.91	58.96	61.06	63.21	65.41	67.65	25
26	51.41	53.28	55.21	57.19	59.21	61.28	63.41	65.58	67.80	70.07	26
27	53.65	55.56	57.51	59.51	61.56	63.65	65.80	68.00	70.25	72.54	27
28	55.95	57.88	59.85	61.88	63.95	66.07	68.25	70.47	72.74	75.06	28
29	58.30	60.25	62.25	64.30	66.40	68.54	70.74	72.99	75.28	77.63	29
30	60.69	62.67	64.69	66.77	68.89	71.06	73.28	75.56	77.88	80.25	30
31	63.14	65.14	67.19	69.28	71.43	73.63	75.88	78.17	80.52	82.91	31
32	65.63	67.65	69.73	71.85	74.02	76.25	78.52	80.84	83.21	85.63	32
33	68.17	70.22	72.32	74.47	76.67	78.91	81.21	83.56	85.95	88.40	33
34	70.77	72.84	74.96	77.14	79.36	81.63	83.95	86.32	88.74	91.21	34
35	73.41	75.51	77.65	79.85	82.10	84.40	86.74	89.15	91.58	94.07	35
36	76.10	78.22	80.40	82.62	84.89	87.21	89.58	92.00	94.47	96.99	36
37	78.84	80.99	83.19	85.43	87.73	90.07	92.47	94.91	97.41	99.95	37
38	81.63	83.80	86.02	88.30	90.62	92.99	95.41	97.88	100.40	102.96	38
39	84.47	86.67	88.91	91.21	93.56	95.95	98.40	100.89	103.43	106.02	39
40	87.36	89.58	91.85	94.17	96.54	98.96	101.43	103.95	106.52	109.14	40
41	90.30	92.54	94.84	97.19	99.58	102.02	104.52	107.06	109.65	112.30	41
42	93.28	95.56	97.88	100.25	102.67	105.14	107.65	110.22	112.84	115.51	42
43	96.32	98.62	100.96	103.36	105.80	108.30	110.84	113.43	116.07	118.77	43
44	99.41	101.73	104.10	106.52	108.99	111.51	114.06	116.69	119.36	122.07	44
45	102.54	104.89	107.28	109.73	112.22	114.77	117.36	120.00	122.69	125.43	45
46	105.73	108.10	110.52	112.99	115.51	118.07	120.69	123.36	126.06	128.84	46
47	108.96	111.36	113.80	116.30	118.84	121.43	124.07	126.77	129.51	132.30	47
48	112.25	114.67	117.14	119.65	122.22	124.84	127.51	130.22	132.99	135.80	48
49	115.58	118.02	120.52	123.06	125.65	128.30	130.99	133.73	136.52	139.36	49
50	118.96	121.43	123.95	126.52	129.14	131.80	134.52	137.28	140.10	142.96	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XII.—BASE 36—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	24.89	26.62	28.40	30.22	32.10	34.02	36.00	38.02	40.10	42.22	0
1	26.10	27.85	29.65	31.51	33.41	35.36	37.36	39.41	41.51	43.65	1
2	27.36	29.14	30.96	32.84	34.77	36.74	38.77	40.84	42.96	45.14	2
3	28.67	30.47	32.32	34.22	36.17	38.17	40.22	42.32	44.47	46.67	3
4	30.02	31.85	33.73	35.65	37.63	39.65	41.73	43.85	46.02	48.25	4
5	31.43	33.28	35.19	37.14	39.14	41.19	43.28	45.43	47.63	49.88	5
6	32.89	34.77	36.69	38.67	40.69	42.77	44.89	47.06	49.28	51.56	6
7	34.40	36.30	38.25	40.25	42.30	44.40	46.54	48.74	50.99	53.28	7
8	35.95	37.88	39.85	41.88	43.95	46.07	48.25	50.47	52.74	55.06	8
9	37.56	39.51	41.51	43.56	45.65	47.80	50.00	52.25	54.54	56.89	9
10	39.21	41.19	43.21	45.28	47.41	49.58	51.80	54.07	56.40	58.77	10
11	40.91	42.91	44.96	47.06	49.21	51.41	53.65	55.95	58.30	60.69	11
12	42.67	44.69	46.77	48.89	51.06	53.28	55.56	57.88	60.25	62.67	12
13	44.47	46.52	48.62	50.77	52.96	55.21	57.51	59.85	62.25	64.69	13
14	46.32	48.40	50.52	52.69	54.91	57.19	59.51	61.88	64.30	66.77	14
15	48.22	50.32	52.47	54.67	56.91	59.21	61.56	63.95	66.40	68.89	15
16	50.17	52.30	54.47	56.69	58.96	61.28	63.65	66.07	68.54	71.06	16
17	52.17	54.32	56.52	58.77	61.06	63.41	65.80	68.25	70.74	73.28	17
18	54.22	56.40	58.62	60.89	63.21	65.58	68.00	70.47	72.99	75.56	18
19	56.32	58.52	60.77	63.06	65.41	67.80	70.25	72.74	75.28	77.88	19
20	58.47	60.69	62.96	65.28	67.65	70.07	72.54	75.06	77.63	80.25	20
21	60.67	62.91	65.21	67.56	69.95	72.40	74.89	77.43	80.02	82.67	21
22	62.91	65.19	67.51	69.88	72.30	74.77	77.28	79.85	82.47	85.14	22
23	65.21	67.51	69.85	72.25	74.69	77.19	79.73	82.32	84.96	87.65	23
24	67.56	69.88	72.25	74.67	77.14	79.65	82.22	84.84	87.51	90.22	24
25	69.95	72.30	74.69	77.14	79.63	82.17	84.77	87.41	90.10	92.84	25
26	72.40	74.77	77.19	79.65	82.17	84.74	87.36	90.02	92.74	95.51	26
27	74.89	77.28	79.73	82.22	84.77	87.36	90.00	92.69	95.43	98.22	27
28	77.43	79.85	82.32	84.84	87.41	90.02	92.69	95.41	98.17	100.99	28
29	80.02	82.47	84.96	87.51	90.10	92.74	95.43	98.17	100.96	103.80	29
30	82.67	85.14	87.65	90.22	92.84	95.51	98.22	100.99	103.80	106.67	30
31	85.36	87.85	90.40	92.99	95.63	98.32	101.06	103.85	106.69	109.58	31
32	88.10	90.62	93.19	95.88	98.47	101.19	103.95	106.77	109.63	112.54	32
33	90.89	93.43	96.02	98.67	101.36	104.10	106.89	109.73	112.62	115.56	33
34	93.73	96.30	98.91	101.58	104.30	107.06	109.88	112.74	115.65	118.62	34
35	96.62	99.21	101.85	104.54	107.28	110.07	112.91	115.80	118.74	121.73	35
36	99.56	102.17	104.84	107.56	110.32	113.14	116.00	118.91	121.88	124.89	36
37	102.54	105.19	107.88	110.62	113.41	116.25	119.14	122.07	125.06	128.10	37
38	105.58	108.25	110.96	113.73	116.54	119.41	122.32	125.28	128.30	131.36	38
39	108.67	111.36	114.10	116.89	119.73	122.62	125.56	128.54	131.58	134.67	39
40	111.80	114.52	117.28	120.10	122.96	125.88	128.84	131.85	134.91	138.02	40
41	114.99	117.73	120.52	123.36	126.25	129.19	132.17	135.21	138.30	141.43	41
42	118.22	120.99	123.80	126.67	129.58	132.54	135.56	138.62	141.73	144.89	42
43	121.51	124.30	127.14	130.02	132.96	135.95	138.99	142.07	145.21	148.40	43
44	124.84	127.65	130.52	133.43	136.40	139.41	142.47	145.58	148.74	151.95	44
45	128.22	131.06	133.95	136.89	139.88	142.91	146.00	149.15	152.32	155.56	45
46	131.65	134.52	137.43	140.40	143.41	146.47	149.58	152.74	155.95	159.21	46
47	135.14	138.02	140.96	143.95	146.99	150.07	153.21	156.40	159.63	162.91	47
48	138.67	141.58	144.54	147.56	150.62	153.73	156.89	160.10	163.36	166.67	48
49	142.25	145.19	148.17	151.21	154.30	157.43	160.62	163.85	167.14	170.47	49
50	145.88	148.84	151.85	154.91	158.02	161.19	164.40	167.65	170.96	174.32	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XII.—BASE 36—SLOPES 2 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	44.40	46.62	48.89	51.21	53.58	56.00	58.46	60.99	63.56	66.17	0
1	45.85	48.10	50.40	52.74	55.15	57.58	60.07	62.62	65.21	67.85	1
2	47.36	49.63	51.95	54.32	56.74	59.21	61.73	64.30	66.91	69.58	2
3	48.91	51.21	53.56	55.95	58.40	60.89	63.43	66.02	68.67	71.36	3
4	50.52	52.84	55.21	57.63	60.10	62.62	65.19	67.80	70.47	73.19	4
5	52.17	54.52	56.91	59.36	61.85	64.40	66.99	69.63	72.32	75.06	5
6	53.88	56.25	58.67	61.14	63.65	66.22	68.84	71.51	74.22	76.99	6
7	55.63	58.02	60.47	62.96	65.51	68.10	70.74	73.43	76.17	78.96	7
8	57.43	59.85	62.32	64.84	67.41	70.02	72.69	75.41	78.17	80.99	8
9	59.28	61.73	64.22	66.77	69.36	72.00	74.69	77.43	80.22	83.06	9
10	61.19	63.65	66.17	68.74	71.36	74.02	76.74	79.51	82.32	85.19	10
11	63.14	65.63	68.17	70.77	73.41	76.10	78.84	81.63	84.47	87.36	11
12	65.14	67.65	70.22	72.84	75.51	78.22	80.99	83.80	86.67	89.58	12
13	67.19	69.73	72.32	74.96	77.65	80.40	83.19	86.02	88.91	91.85	13
14	69.28	71.85	74.47	77.14	79.85	82.62	85.43	88.30	91.21	94.17	14
15	71.43	74.02	76.67	79.36	82.10	84.89	87.73	90.62	93.56	96.54	15
16	73.63	76.25	78.91	81.63	84.40	87.21	90.07	92.99	95.95	98.96	16
17	75.88	78.52	81.21	83.95	86.74	89.58	92.47	95.41	98.40	101.43	17
18	78.17	80.84	83.56	86.32	89.15	92.00	94.91	97.88	100.89	103.95	18
19	80.52	83.21	85.95	88.74	91.58	94.47	97.41	100.40	103.43	106.52	19
20	82.91	85.63	88.40	91.21	94.07	96.99	99.95	102.96	106.02	109.14	20
21	85.36	88.10	90.89	93.73	96.62	99.56	102.54	105.58	108.67	111.80	21
22	87.85	90.62	93.43	96.30	99.21	102.17	105.19	108.25	111.36	114.52	22
23	90.40	93.19	96.02	98.91	101.85	104.84	107.88	110.96	114.10	117.28	23
24	92.99	95.80	98.67	101.58	104.54	107.56	110.62	113.73	116.89	120.10	24
25	95.63	98.47	101.36	104.30	107.28	110.32	113.41	116.54	119.73	122.96	25
26	98.32	101.19	104.10	107.06	110.07	113.14	116.25	119.41	122.62	125.88	26
27	101.06	103.95	106.89	109.88	112.91	116.00	119.14	122.32	125.56	128.84	27
28	103.85	106.77	109.73	112.74	115.80	118.91	122.07	125.28	128.54	131.85	28
29	106.69	109.63	112.62	115.65	118.74	121.88	125.06	128.30	131.58	134.91	29
30	109.58	112.54	115.56	118.62	121.73	124.89	128.10	131.36	134.67	138.02	30
31	112.52	115.51	118.54	121.63	124.77	127.95	131.19	134.47	137.80	141.19	31
32	115.51	118.52	121.58	124.69	127.85	131.06	134.32	137.63	140.99	144.40	32
33	118.54	121.58	124.67	127.80	130.99	134.22	137.51	140.84	144.22	147.65	33
34	121.63	124.69	127.80	130.96	134.17	137.43	140.74	144.10	147.51	150.96	34
35	124.77	127.85	130.99	134.17	137.41	140.69	144.02	147.41	150.84	154.32	35
36	127.95	131.06	134.22	137.43	140.69	144.00	147.36	150.77	154.22	157.73	36
37	131.19	134.32	137.51	140.74	144.02	147.36	150.74	154.17	157.65	161.19	37
38	134.47	137.63	140.84	144.10	147.41	150.77	154.17	157.63	161.14	164.69	38
39	137.80	140.99	144.22	147.51	150.84	154.22	157.65	161.14	164.67	168.25	39
40	141.19	144.40	147.65	150.96	154.32	157.73	161.19	164.69	168.25	171.85	40
41	144.62	147.85	151.14	154.47	157.85	161.28	164.77	168.30	171.88	175.51	41
42	148.10	151.36	154.67	158.02	161.43	164.89	168.40	171.95	175.56	179.21	42
43	151.63	154.91	158.25	161.63	165.06	168.54	172.07	175.65	179.28	182.96	43
44	155.21	158.52	161.88	165.28	168.74	172.25	175.80	179.41	183.06	186.77	44
45	158.84	162.17	165.56	168.99	172.47	176.00	179.58	183.21	186.89	190.62	45
46	162.52	165.88	169.28	172.74	176.25	179.80	183.41	187.06	190.77	194.52	46
47	166.25	169.63	173.06	176.54	180.07	183.65	187.28	190.96	194.69	198.47	47
48	170.02	173.43	176.89	180.40	183.95	187.56	191.21	194.91	198.67	202.47	48
49	173.85	177.28	180.77	184.30	187.88	191.51	195.19	198.91	202.69	206.52	49
50	177.73	181.19	184.69	188.25	191.85	195.51	199.21	202.96	206.77	210.62	50
	31	32	33	34	53	36	37	38	39	40	

TABLE XII.—BASE 36—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	68.84	71.56	74.32	77.14	80.00	82.91	85.88	88.89	91.95	95.06	0
1	70.54	73.28	76.07	78.91	81.80	84.74	87.73	90.77	93.85	96.99	1
2	72.30	75.06	77.88	80.74	83.65	86.62	89.63	92.69	95.80	98.96	2
3	74.10	76.89	79.73	82.62	85.56	88.54	91.58	94.67	97.80	100.99	3
4	75.95	78.77	81.63	84.54	87.51	90.52	93.58	96.69	99.85	103.06	4
5	77.85	80.69	83.58	86.52	89.51	92.54	95.63	98.77	101.95	105.19	5
6	79.80	82.67	85.58	88.54	91.56	94.62	97.73	100.89	104.10	107.36	6
7	81.80	84.69	87.63	90.62	93.65	96.74	99.88	103.06	106.30	109.58	7
8	83.85	86.77	89.73	92.74	95.80	98.91	102.07	105.28	108.54	111.85	8
9	85.95	88.89	91.88	94.91	98.00	101.14	104.32	107.56	110.84	114.17	9
10	88.10	91.06	94.07	97.14	100.25	103.41	106.62	109.88	113.19	116.54	10
11	90.30	93.28	96.32	99.41	102.54	105.73	108.96	112.25	115.58	118.96	11
12	92.54	95.56	98.62	101.73	104.89	108.10	111.36	114.67	118.02	121.43	12
13	94.84	97.88	100.96	104.10	107.28	110.52	113.80	117.14	120.52	125.95	13
14	97.19	100.25	103.36	106.52	109.73	112.99	116.30	119.65	123.06	126.52	14
15	99.58	102.67	105.80	108.99	112.22	115.51	118.84	122.22	125.65	129.14	15
16	102.02	105.14	108.30	111.51	114.77	118.07	121.43	124.84	128.30	131.80	16
17	104.52	107.65	110.84	114.06	117.36	120.69	124.07	127.51	130.99	134.52	17
18	107.06	110.22	113.43	116.69	120.00	123.36	126.77	130.22	133.73	137.28	18
19	109.65	112.84	116.07	119.36	122.69	126.06	129.51	132.99	136.52	140.10	19
20	112.30	115.51	118.77	122.07	125.43	128.84	132.30	135.80	159.36	142.96	20
21	114.99	118.22	121.51	124.84	128.22	131.65	135.14	138.67	142.25	145.88	21
22	117.73	120.99	124.30	127.65	131.06	134.52	138.02	141.58	145.19	148.84	22
23	120.52	123.80	127.14	130.52	133.95	137.43	140.96	144.54	148.17	151.85	23
24	123.36	126.67	130.02	133.43	136.89	140.40	143.95	147.56	151.21	154.91	24
25	126.25	129.58	132.96	136.40	139.88	143.41	146.99	150.62	154.30	158.02	25
26	129.19	132.54	135.95	139.41	142.91	146.47	150.07	153.73	157.43	161.19	26
27	132.17	135.56	138.99	142.47	146.00	149.58	153.21	156.89	160.62	164.40	27
28	135.21	138.62	142.07	145.58	149.15	152.74	156.40	160.10	163.85	167.65	28
29	138.30	141.73	145.21	148.74	152.32	155.95	159.63	163.36	167.14	170.96	29
30	141.43	144.89	148.40	151.95	155.56	159.21	162.91	166.67	170.47	174.32	30
31	144.62	148.10	151.63	155.21	158.84	162.52	166.25	170.02	173.85	177.73	31
32	147.85	151.36	154.91	158.52	162.17	165.88	169.63	173.43	177.28	181.19	32
33	151.14	154.67	158.25	161.88	165.56	169.28	173.06	176.89	180.77	184.69	33
34	154.47	158.02	161.63	165.28	168.99	172.74	176.54	180.40	184.30	188.25	34
35	157.85	161.43	165.06	168.74	172.47	176.25	180.07	183.95	187.88	191.85	35
36	161.28	164.89	168.54	172.25	176.00	179.80	183.65	187.56	191.51	195.51	36
37	164.77	168.40	172.07	175.80	179.58	183.41	187.28	191.21	195.19	199.21	37
38	168.30	171.95	175.65	179.41	183.21	187.06	190.96	194.91	198.91	202.96	38
39	171.88	175.56	179.28	183.06	186.89	190.77	194.69	198.67	202.69	206.77	39
40	175.51	179.21	182.96	186.77	190.62	194.52	198.47	202.47	206.52	210.62	40
41	179.19	182.91	186.69	190.52	194.40	198.32	202.30	206.32	210.40	214.52	41
42	182.91	186.67	190.47	194.32	198.22	202.17	206.17	210.22	214.32	218.47	42
43	186.69	190.47	194.30	198.17	202.10	206.07	210.10	214.17	218.30	222.47	43
44	190.52	194.32	198.17	202.07	206.02	210.02	214.07	218.17	222.32	226.52	44
45	194.40	198.22	202.10	206.02	210.00	214.02	218.10	222.22	226.40	230.62	45
46	198.32	202.17	206.07	210.02	214.02	218.07	222.17	226.32	230.52	234.77	46
47	202.30	206.17	210.10	214.07	218.10	222.17	226.30	230.47	234.69	238.96	47
48	206.32	210.22	214.17	218.17	222.22	226.32	230.47	234.67	238.91	243.21	48
49	210.40	214.32	218.30	222.32	226.40	230.52	234.69	238.91	243.19	247.51	49
50	214.52	218.47	222.47	226.52	230.62	234.77	238.96	243.21	247.51	251.85	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XIII.—BASE 40—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet
0	0.76	1.58	2.44	3.36	4.32	5.33	6.40	7.51	8.67	9.88	0
1	1.55	2.39	3.28	4.22	5.21	6.25	7.33	8.47	9.65	10.89	1
2	2.39	3.26	4.17	5.13	6.15	7.21	8.32	9.48	10.69	11.95	2
3	3.28	4.17	5.11	6.10	7.13	8.22	9.36	10.54	11.78	13.06	3
4	4.22	5.13	6.10	7.11	8.17	9.28	10.44	11.65	12.91	14.22	4
5	5.21	6.15	7.13	8.17	9.26	10.39	11.58	12.81	14.10	15.43	5
6	6.25	7.21	8.22	9.28	10.39	11.55	12.76	14.02	15.33	16.69	6
7	7.33	8.32	9.36	10.44	11.58	12.76	14.00	15.28	16.62	18.00	7
8	8.47	9.48	10.54	11.65	12.81	14.02	15.28	16.59	17.95	19.36	8
9	9.65	10.69	11.78	12.91	14.10	15.33	16.62	17.95	19.33	20.76	9
10	10.89	11.95	13.06	14.22	15.43	16.69	18.00	19.36	20.76	22.22	10
11	12.17	13.26	14.39	15.58	16.81	18.10	19.43	20.81	22.25	23.73	11
12	13.51	14.62	15.78	16.99	18.25	19.55	20.91	22.32	23.78	25.28	12
13	14.89	16.02	17.21	18.44	19.73	21.06	22.44	23.88	25.36	26.89	13
14	16.32	17.48	18.69	19.95	21.26	22.62	24.02	25.48	26.99	28.54	14
15	17.80	18.99	20.22	21.51	22.84	24.22	25.65	27.13	28.67	30.25	15
16	19.33	20.54	21.80	23.11	24.47	25.88	27.33	28.84	30.39	32.00	16
17	20.91	22.15	23.43	24.76	26.15	27.58	29.06	30.59	32.17	33.80	17
18	22.54	23.80	25.11	26.47	27.88	29.33	30.84	32.39	34.00	35.65	18
19	24.22	25.51	26.84	28.22	29.65	31.13	32.67	34.25	35.88	37.55	19
20	25.95	27.26	28.62	30.02	31.48	32.99	34.54	36.15	37.80	39.51	20
21	27.73	29.06	30.44	31.88	33.36	34.89	36.47	38.10	39.78	41.51	21
22	29.55	30.91	32.32	33.78	35.28	36.84	38.44	40.10	41.80	43.55	22
23	31.43	32.81	34.25	35.73	37.26	38.84	40.47	42.15	43.88	45.65	23
24	33.36	34.76	36.22	37.73	39.28	40.89	42.54	44.25	46.00	47.80	24
25	35.33	36.76	38.25	39.78	41.36	42.99	44.67	46.39	48.17	50.00	25
26	37.36	38.81	40.32	41.88	43.48	45.13	46.84	48.59	50.39	52.25	26
27	39.43	40.91	42.44	44.02	45.65	47.33	49.06	50.84	52.67	54.54	27
28	41.55	43.06	44.62	46.22	47.88	49.58	51.33	53.13	54.99	56.89	28
29	43.73	45.26	46.84	48.47	50.15	51.88	53.65	55.48	57.36	59.28	29
30	45.95	47.51	49.11	50.76	52.47	54.22	56.02	57.88	59.78	61.73	30
31	48.22	49.80	51.43	53.11	54.84	56.62	58.44	60.32	62.25	64.22	31
32	50.54	52.15	53.80	55.51	57.26	59.06	60.91	62.81	64.76	66.76	32
33	52.91	54.54	56.22	57.95	59.73	61.55	63.43	65.36	67.33	69.36	33
34	55.33	56.99	58.69	60.44	62.25	64.10	66.00	67.95	69.95	72.00	34
35	57.80	59.48	61.21	62.99	64.81	66.69	68.62	70.59	72.62	74.69	35
36	60.32	62.02	63.78	65.58	67.43	69.33	71.28	73.28	75.33	77.43	36
37	62.89	64.62	66.39	68.22	70.10	72.02	74.00	76.02	78.10	80.22	37
38	65.51	67.26	69.06	70.91	72.81	74.76	76.76	78.81	80.91	83.06	38
39	68.17	69.95	71.78	73.65	75.58	77.55	79.58	81.65	83.78	85.95	39
40	70.89	72.69	74.54	76.44	78.39	80.39	82.44	84.54	86.69	88.89	40
41	73.65	75.48	77.36	79.28	81.26	83.28	85.36	87.48	89.65	91.88	41
42	76.47	78.32	80.22	82.17	84.17	86.22	88.32	90.47	92.67	94.91	42
43	79.33	81.21	83.13	85.11	87.13	89.21	91.33	93.51	95.73	98.00	43
44	82.25	84.15	86.10	88.10	90.15	92.25	94.40	96.59	98.84	101.13	44
45	85.21	87.13	89.11	91.13	93.21	95.33	97.51	99.73	102.00	104.32	45
46	88.22	90.17	92.17	94.22	96.32	98.47	100.67	102.91	105.21	107.55	46
47	91.28	93.26	95.28	97.36	99.48	101.65	103.88	106.15	108.47	110.84	47
48	94.39	96.39	98.44	100.54	102.69	104.89	107.13	109.43	111.78	114.17	48
49	97.55	99.58	101.65	103.78	105.95	108.17	110.44	112.76	115.13	117.55	49
50	100.76	102.81	104.91	107.06	109.26	111.51	113.80	116.15	118.54	120.99	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XIII.—BASE 40—SLOPES 2 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	11.14	12.44	13.80	15.21	16.67	18.17	19.73	21.33	22.99	24.69	0
1	12.17	13.51	14.89	16.32	17.80	19.33	20.91	22.54	24.22	25.95	1
2	13.26	14.62	16.02	17.48	18.99	20.54	22.15	23.80	25.51	27.26	2
3	14.39	15.78	17.21	18.69	20.22	21.80	23.43	25.11	26.84	28.62	3
4	15.58	16.99	18.44	19.95	21.51	23.11	24.76	26.47	28.22	30.02	4
5	16.81	18.25	19.73	21.26	22.84	24.47	26.15	27.88	29.65	31.48	5
6	18.10	19.55	21.06	22.62	24.22	25.88	27.58	29.33	31.13	32.99	6
7	19.43	20.91	22.44	24.02	25.65	27.33	29.06	30.84	32.67	34.54	7
8	20.81	22.32	23.88	25.48	27.13	28.84	30.59	32.39	34.25	36.15	8
9	22.25	23.78	25.36	26.99	28.67	30.39	32.17	34.00	35.88	37.80	9
10	23.73	25.28	26.89	28.54	30.25	32.00	33.80	35.65	37.55	39.51	10
11	25.26	26.84	28.47	30.15	31.88	33.65	35.48	37.36	39.28	41.26	11
12	26.84	28.44	30.10	31.80	33.55	35.36	37.21	39.11	41.06	43.06	12
13	28.47	30.10	31.78	33.51	35.28	37.11	39.99	40.91	42.89	44.91	13
14	30.15	31.80	33.51	35.26	37.06	38.91	40.81	42.76	44.76	46.81	14
15	31.88	33.55	35.28	37.06	38.89	40.76	42.69	44.67	46.69	48.76	15
16	33.65	35.36	37.11	38.91	40.76	42.67	44.62	46.62	48.67	50.76	16
17	35.48	37.21	39.99	40.81	42.69	44.62	46.59	48.62	50.69	52.81	17
18	37.36	39.11	40.91	42.76	44.67	46.62	48.62	50.67	52.76	54.91	18
19	39.28	41.06	42.89	44.76	46.69	48.67	50.69	52.76	54.89	57.06	19
20	41.26	43.06	44.91	46.81	48.76	50.76	52.81	54.91	57.06	59.26	20
21	43.28	45.11	46.99	48.91	50.89	52.91	54.99	57.11	59.28	61.51	21
22	45.36	47.21	49.11	51.06	53.06	55.11	57.21	59.36	61.55	63.80	22
23	47.48	49.36	51.28	53.26	55.28	57.36	59.48	61.65	63.88	66.15	23
24	49.65	51.55	53.51	55.51	57.55	59.65	61.80	64.00	66.25	68.54	24
25	51.88	53.80	55.78	57.80	59.88	62.00	64.17	66.39	68.67	70.99	25
26	54.15	56.10	58.10	60.15	62.25	64.39	66.59	68.84	71.13	73.48	26
27	56.47	58.44	60.47	62.54	64.67	66.84	69.06	71.33	73.65	76.02	27
28	58.84	60.84	62.89	64.99	67.13	69.33	71.58	73.88	76.22	78.62	28
29	61.26	63.28	65.36	67.48	69.65	71.88	74.15	76.47	78.84	81.26	29
30	63.73	65.78	67.88	70.02	72.22	74.47	76.76	79.11	81.51	83.95	30
31	66.25	68.32	70.44	72.62	74.84	77.11	79.43	81.80	84.22	86.69	31
32	68.81	70.91	73.06	75.26	77.51	79.80	82.15	84.54	86.99	89.48	32
33	71.43	73.55	75.73	77.95	80.22	82.54	84.91	87.33	89.80	92.32	33
34	74.10	76.25	78.44	80.69	82.99	85.33	87.73	90.17	92.67	95.21	34
35	76.81	78.99	81.21	83.48	85.80	88.17	90.59	93.06	95.58	98.15	35
36	79.58	81.78	84.02	86.32	88.67	91.06	93.51	96.00	98.54	101.13	36
37	82.39	84.62	86.89	89.21	91.58	94.00	96.47	98.99	101.55	104.17	37
38	85.26	87.51	89.80	92.15	94.54	96.99	99.48	102.02	104.62	107.26	38
39	88.17	90.44	92.76	95.15	97.55	100.02	102.54	105.11	107.73	110.39	39
40	91.14	93.43	95.78	98.17	100.62	103.11	105.65	108.25	110.89	113.58	40
41	94.15	96.47	98.84	101.26	103.73	106.25	108.81	111.43	114.10	116.81	41
42	97.21	99.55	101.95	104.39	106.89	109.43	112.02	114.67	117.36	120.10	42
43	100.32	102.69	105.11	107.58	110.10	112.67	115.28	117.95	120.67	123.43	43
44	103.48	105.88	108.32	110.81	113.36	115.95	118.59	121.28	124.02	126.81	44
45	106.69	109.11	111.58	114.10	116.67	119.28	121.95	124.67	127.43	130.25	45
46	109.95	112.39	114.89	117.43	120.02	122.67	125.36	128.10	130.89	133.73	46
47	113.26	115.73	118.25	120.81	123.43	126.10	128.81	131.58	134.39	137.26	47
48	116.62	119.11	121.65	124.25	126.89	129.58	132.32	135.11	137.95	140.84	48
49	120.02	122.54	125.11	127.73	130.39	133.11	135.88	138.69	141.55	144.47	49
50	123.48	126.02	128.62	131.26	133.95	136.69	139.48	142.32	145.21	148.15	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XIII.—BASE 40—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	26.44	28.25	30.10	32.00	33.95	35.95	38.00	40.10	42.25	44.44	0
1	27.73	29.55	31.43	33.36	35.33	37.36	39.43	41.55	43.73	45.95	1
2	29.06	30.91	32.81	34.76	36.76	38.81	40.91	43.06	45.26	47.51	2
3	30.44	32.32	34.25	36.22	38.25	40.32	42.44	44.62	46.84	49.11	3
4	31.88	33.78	35.73	37.73	39.78	41.88	44.02	46.22	48.47	50.76	4
5	33.36	35.28	37.26	39.28	41.36	43.48	45.65	47.88	50.15	52.47	5
6	34.89	36.84	38.84	40.89	42.99	45.13	47.33	49.58	51.88	54.22	6
7	36.47	38.44	40.47	42.54	44.67	46.84	49.06	51.33	53.65	56.02	7
8	38.10	40.10	42.15	44.25	46.39	48.59	50.84	53.13	55.48	57.88	8
9	39.78	41.80	43.88	46.00	48.17	50.39	52.67	54.99	57.36	59.78	9
10	41.51	43.55	45.65	47.80	50.00	52.25	54.54	56.89	59.28	61.73	10
11	43.28	45.36	47.48	49.65	51.88	54.15	56.47	58.84	61.26	63.73	11
12	45.11	47.21	49.36	51.55	53.80	56.10	58.44	60.84	63.28	65.78	12
13	46.99	49.11	51.28	53.51	55.78	58.10	60.47	62.89	65.36	67.88	13
14	48.91	51.06	53.26	55.51	57.80	60.15	62.54	64.99	67.48	70.02	14
15	50.89	53.06	55.28	57.55	59.88	62.25	64.67	67.13	69.65	72.22	15
16	52.91	55.11	57.36	59.65	62.00	64.39	66.84	69.33	71.88	74.47	16
17	54.99	57.21	59.48	61.80	64.17	66.59	69.06	71.58	74.15	76.76	17
18	57.11	59.36	61.65	64.00	66.39	68.84	71.33	73.88	76.47	79.11	18
19	59.28	61.55	63.88	66.25	68.67	71.13	73.65	76.22	78.84	81.51	19
20	61.51	63.80	66.15	68.54	70.99	73.48	76.02	78.62	81.26	83.95	20
21	63.78	66.10	68.47	70.89	73.36	75.88	78.44	81.06	83.73	86.44	21
22	66.10	68.44	70.84	73.28	75.78	78.32	80.91	83.55	86.25	88.99	22
23	68.47	70.84	73.26	75.73	78.25	80.81	83.43	86.10	88.81	91.58	23
24	70.89	73.28	75.73	78.22	80.76	83.36	86.00	88.69	91.43	94.22	24
25	73.36	75.78	78.25	80.76	83.33	85.95	88.62	91.33	94.10	96.91	25
26	75.88	78.32	80.81	83.36	85.95	88.59	91.28	94.02	96.81	99.65	26
27	78.44	80.91	83.43	86.00	88.62	91.28	94.00	96.76	99.58	102.44	27
28	81.06	83.55	86.10	88.69	91.33	94.02	96.76	99.55	102.39	105.28	28
29	83.73	86.25	88.81	91.43	94.10	96.81	99.58	102.39	105.26	108.17	29
30	86.44	88.99	91.58	94.22	96.91	99.65	102.44	105.28	108.17	111.11	30
31	89.21	91.78	94.39	97.06	99.78	102.54	105.36	108.22	111.13	114.10	31
32	92.02	94.62	97.26	99.95	102.69	105.48	108.32	111.21	114.15	117.13	32
33	94.89	97.50	100.17	102.89	105.65	108.47	111.33	114.25	117.21	120.22	33
34	97.80	100.44	103.13	105.88	108.67	111.51	114.39	117.33	120.32	123.36	34
35	100.76	103.43	106.15	108.91	111.73	114.59	117.51	120.47	123.48	126.54	35
36	103.78	106.47	109.21	112.00	114.84	117.75	120.67	123.65	126.69	129.78	36
37	106.84	109.55	112.32	115.13	118.00	120.91	123.88	126.89	129.95	133.06	37
38	109.95	112.69	115.48	118.32	121.21	124.15	127.13	130.17	133.26	136.39	38
39	113.11	115.88	118.69	121.55	124.47	127.43	130.44	133.51	136.62	139.78	39
40	116.32	119.11	121.95	124.84	127.78	130.76	133.80	136.89	140.02	143.21	40
41	119.58	122.39	125.26	128.17	131.13	134.15	137.21	140.32	143.48	146.69	41
42	122.89	125.73	128.62	131.55	134.54	137.58	140.67	143.80	146.99	150.22	42
43	126.25	129.11	132.02	134.99	138.00	141.06	144.17	147.33	150.54	153.80	43
44	129.65	132.54	135.48	138.47	141.51	144.59	147.73	150.91	154.15	157.43	44
45	133.11	136.02	138.99	142.00	145.06	148.17	151.33	154.54	157.80	161.11	45
46	136.62	139.55	142.54	145.58	148.67	151.80	154.99	158.22	161.51	164.84	46
47	140.17	143.13	146.15	149.21	152.32	155.48	158.69	161.95	165.26	168.62	47
48	143.78	146.76	149.80	152.89	156.02	159.21	162.44	165.73	169.06	172.44	48
49	147.43	150.44	153.51	156.62	159.78	162.99	166.25	169.55	172.91	176.32	49
50	151.13	154.17	157.26	160.39	163.58	166.81	170.10	173.43	176.81	180.25	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XIII.—BASE 40—SLOPES 2 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	46.69	48.99	51.33	53.73	56.17	58.67	61.21	63.80	66.44	69.14	0
1	48.22	50.54	52.91	55.33	57.80	60.32	62.89	65.51	68.17	70.89	1
2	49.80	52.15	54.54	56.99	59.48	62.02	64.62	67.26	69.95	72.69	2
3	51.43	53.80	56.22	58.69	61.21	63.78	66.39	69.06	71.78	74.54	3
4	53.11	55.51	57.95	60.44	62.99	65.58	68.22	70.91	73.65	76.44	4
5	54.84	57.26	59.73	62.25	64.81	67.43	70.10	72.81	75.58	78.39	5
6	56.62	59.06	61.55	64.10	66.69	69.33	72.02	74.76	77.55	80.39	6
7	58.44	60.91	63.43	66.00	68.62	71.28	74.00	76.76	79.58	82.44	7
8	60.32	62.81	65.36	67.95	70.59	73.28	76.02	78.81	81.65	84.54	8
9	62.25	64.76	67.33	69.95	72.62	75.33	78.10	80.91	83.78	86.69	9
10	64.22	66.76	69.36	72.00	74.69	77.43	80.22	83.06	85.95	88.89	10
11	66.25	68.81	71.43	74.10	76.81	79.58	82.39	85.26	88.17	91.14	11
12	68.32	70.91	73.55	76.25	78.99	81.78	84.62	87.51	90.44	93.43	12
13	70.44	73.06	75.73	78.44	81.21	84.02	86.89	89.80	92.76	95.78	13
14	72.62	75.26	77.95	80.69	83.48	86.32	89.21	92.15	95.13	98.17	14
15	74.84	77.51	80.22	82.99	85.80	88.67	91.58	94.54	97.55	100.62	15
16	77.11	79.80	82.54	85.33	88.17	91.06	94.00	96.99	100.02	103.11	16
17	79.43	82.15	84.91	87.73	90.59	93.51	96.47	99.48	102.54	105.65	17
18	81.80	84.54	87.33	90.17	93.06	96.00	98.99	102.02	105.11	108.25	18
19	84.22	86.99	89.80	92.67	95.58	98.54	101.55	104.62	107.73	110.89	19
20	86.69	89.48	92.32	95.21	98.15	101.13	104.17	107.26	110.39	113.58	20
21	89.21	92.02	94.89	97.80	100.76	103.78	106.84	109.95	113.11	116.32	21
22	91.78	94.62	97.50	100.44	103.43	106.47	109.55	112.69	115.88	119.11	22
23	94.39	97.26	100.17	103.13	106.15	109.21	112.32	115.48	118.69	121.95	23
24	97.06	99.95	102.89	105.88	108.91	112.00	115.13	118.32	121.55	124.84	24
25	99.78	102.69	105.65	108.67	111.73	114.84	118.00	121.21	124.47	127.78	25
26	102.54	105.48	108.47	111.51	114.59	117.73	120.91	124.15	127.43	130.76	26
27	105.36	108.32	111.33	114.39	117.51	120.67	123.88	127.13	130.44	133.80	27
28	108.22	111.21	114.25	117.33	120.47	123.65	126.89	130.17	133.51	136.89	28
29	111.13	114.15	117.21	120.32	123.48	126.69	129.95	133.26	136.62	140.02	29
30	114.10	117.13	120.22	123.36	126.54	129.78	133.06	136.39	139.78	143.21	30
31	117.11	120.17	123.28	126.44	129.65	132.91	136.22	139.58	142.99	146.44	31
32	120.17	123.26	126.39	129.58	132.81	136.10	139.45	142.81	146.25	149.73	32
33	123.28	126.39	129.55	132.76	136.02	139.33	142.69	146.10	149.55	153.06	33
34	126.44	129.58	132.76	136.00	139.28	142.62	146.00	149.43	152.91	156.44	34
35	129.65	132.81	136.02	139.28	142.59	145.95	149.36	152.81	156.32	159.88	35
36	132.91	136.10	139.33	142.62	145.95	149.33	152.76	156.25	159.78	163.36	36
37	136.22	139.43	142.69	146.00	149.36	152.76	156.22	159.73	163.28	166.89	37
38	139.58	142.81	146.10	149.43	152.81	156.25	159.73	163.26	166.84	170.47	38
39	142.99	146.25	149.55	152.91	156.32	159.78	163.28	166.84	170.44	174.10	39
40	146.44	149.73	153.06	156.44	159.88	163.36	166.89	170.47	174.10	177.78	40
41	149.95	153.26	156.62	160.02	163.48	166.99	170.54	174.15	177.80	181.51	41
42	153.51	156.84	160.22	163.65	167.13	170.67	174.25	177.88	181.55	185.28	42
43	157.11	160.47	163.88	167.33	170.84	174.39	178.00	181.65	185.36	189.11	43
44	160.76	164.15	167.58	171.06	174.59	178.17	181.80	185.48	189.21	192.99	44
45	164.47	167.88	171.33	174.84	178.39	182.00	185.65	189.36	193.11	196.91	45
46	168.22	171.65	175.13	178.67	182.25	185.88	189.55	193.28	197.06	200.89	46
47	172.02	175.48	178.99	182.54	186.15	189.80	193.51	197.26	201.06	204.91	47
48	175.88	179.36	182.89	186.47	190.10	193.78	197.51	201.28	205.11	208.99	48
49	179.78	183.28	186.84	190.44	194.10	197.80	201.55	205.36	209.21	213.11	49
50	183.73	187.26	190.84	194.47	198.15	201.88	205.65	209.48	213.36	217.28	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XIII.—BASE 40—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	71.88	74.67	77.51	80.40	83.33	86.32	89.36	92.44	94.58	97.76	0
1	73.65	76.47	79.33	82.25	85.21	88.22	91.23	94.39	97.55	100.76	1
2	75.48	78.32	81.21	84.15	87.13	90.17	93.26	96.39	99.58	102.81	2
3	77.36	80.22	83.13	86.10	89.11	92.17	95.28	98.44	101.65	104.91	3
4	79.28	82.17	85.11	88.10	91.13	94.22	97.36	100.54	103.78	107.06	4
5	81.26	84.17	87.13	90.15	93.21	96.32	99.48	102.69	105.95	109.26	5
6	83.28	86.22	89.21	92.25	95.33	98.47	101.65	104.89	108.17	111.51	6
7	85.36	88.32	91.33	94.40	97.51	100.67	103.88	107.13	110.44	113.80	7
8	87.48	90.47	93.51	96.59	99.73	102.91	106.15	109.43	112.76	116.15	8
9	89.65	92.67	95.73	98.84	102.00	105.21	108.47	111.78	115.13	118.54	9
10	91.88	94.91	98.00	101.13	104.32	107.55	110.84	114.17	117.55	120.99	10
11	94.15	97.21	100.32	103.48	106.69	109.95	113.26	116.62	120.02	123.48	11
12	96.47	99.55	102.69	105.88	109.11	112.39	115.73	119.11	122.54	126.02	12
13	98.84	101.95	105.11	108.32	111.58	114.89	118.25	121.65	125.11	128.62	13
14	101.26	104.39	107.58	110.81	114.10	117.43	120.81	124.25	127.73	131.26	14
15	103.73	106.89	110.10	113.36	116.67	120.02	123.43	126.89	130.39	133.95	15
16	106.25	109.43	112.67	115.95	119.28	122.67	126.10	129.58	133.11	136.69	16
17	108.81	112.02	115.28	118.59	121.95	125.36	128.81	132.32	135.88	139.48	17
18	111.43	114.67	117.95	121.28	124.67	128.10	131.58	135.11	138.69	142.32	18
19	114.10	117.36	120.67	124.02	127.43	130.89	134.39	137.95	141.55	145.21	19
20	116.81	120.10	123.43	126.81	130.25	133.73	137.26	140.84	144.47	148.15	20
21	119.58	122.89	126.25	129.65	133.11	136.62	140.17	143.78	147.45	151.13	21
22	122.39	125.73	129.11	132.54	136.02	139.55	143.13	146.76	150.44	154.17	22
23	125.26	128.62	132.02	135.48	138.99	142.54	146.15	149.80	153.51	157.26	23
24	128.17	131.55	134.99	138.47	142.00	145.58	149.21	152.89	156.62	160.39	24
25	131.13	134.54	138.00	141.51	145.06	148.67	152.32	156.02	159.78	163.58	25
26	134.15	137.58	141.06	144.59	148.17	151.80	155.48	159.21	162.99	166.81	26
27	137.21	140.67	144.17	147.73	151.33	154.99	158 69	162.44	166.25	170.10	27
28	140.32	143.80	147.33	150.91	154.54	158.22	161.95	165.73	169.55	173.43	28
29	143.48	146.99	150.54	154.15	157.80	161.51	165.26	169.06	172.91	176.81	29
30	146.69	150.22	153.80	157.43	161.11	164.84	168.62	172.44	176.32	180.25	30
31	149.95	153.51	157.11	160.76	164.47	168.22	172.02	175.88	179.78	183.73	31
32	153.26	156.84	160.47	164.15	167.88	171.65	175.48	179.36	183.28	187.26	32
33	156.62	160.22	163.88	167.58	171.33	175.13	178.99	182.89	186.84	190.84	33
34	160.02	163.65	167.33	171.06	174.84	178.67	182.54	186.47	190.44	194.47	34
35	163.48	167.13	170.84	174.59	178.39	182.25	186.15	190.10	194.10	198.15	35
36	166.99	170.67	174.39	178.17	182.00	185.88	189.80	193.78	197.80	201.88	36
37	170.54	174.25	178.00	181.80	185.65	189.55	193.51	197.51	201.55	205.65	37
38	174.15	177.88	181.65	185.48	189.36	193.28	197.26	201.28	205.36	209.48	38
39	177.80	181.55	185.36	189.21	193.11	197.06	201.06	205.11	209.21	213.36	39
40	181.51	185.28	189.11	192.99	196.91	200.89	204.91	208.99	213.11	217.28	40
41	185.26	189.06	192.91	196.81	200.76	204.76	208.81	212.91	217.06	221.26	41
42	189.06	192.89	196.76	200.69	204.67	208.69	212.76	216.89	221.06	225.28	42
43	192.91	196.76	200.67	204.62	208.62	212.67	216.76	220.91	225.11	229.36	43
44	196.81	200.69	204.62	208.59	212.62	216.69	220.81	224.99	229.21	233.48	44
45	200.76	204.67	208.62	212.62	216.67	220.76	224.91	229.11	233.36	237.65	45
46	204.76	208.69	212.67	216.69	220.76	224.89	229.06	233.26	237.55	241.88	46
47	208.81	212.76	216.76	220.81	224.91	229.06	233.26	237.51	241.80	246.15	47
48	212.91	216.89	220.91	224.99	229.11	233.28	237.51	241.78	246.10	250.47	48
49	217.06	221.06	225.11	229.21	233.36	237.55	241.80	246.10	250.44	254.84	49
50	221.26	225.28	229.36	233.48	237.65	241.88	246.15	250.47	254.84	259.26	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XIV.—BASE 50—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.95	1.95	3.00	4.10	5.25	6.44	7.69	8.99	10.33	11.73	0
1	1.93	2.95	4.02	5.15	6.32	7.54	8.81	10.14	11.51	12.93	1
2	2.95	4.00	5.10	6.25	7.44	8.69	9.99	11.33	12.73	14.17	2
3	4.02	5.10	6.22	7.40	8.62	9.89	11.21	12.58	14.00	15.47	3
4	5.15	6.25	7.40	8.59	9.84	11.14	12.48	13.88	15.32	16.81	4
5	6.32	7.44	8.62	9.84	11.11	12.43	13.80	15.22	16.69	18.21	5
6	7.54	8.69	9.89	11.14	12.43	13.78	15.17	16.62	18.11	19.65	6
7	8.81	9.99	11.21	12.48	13.80	15.17	16.59	18.06	19.58	21.15	7
8	10.14	11.33	12.58	13.88	15.22	16.62	18.06	19.56	21.10	22.69	8
9	11.51	12.73	14.00	15.32	16.69	18.11	19.58	21.10	22.67	24.28	9
10	12.93	14.17	15.47	16.81	18.21	19.65	21.15	22.69	24.28	25.93	10
11	14.40	15.67	16.99	18.36	19.78	21.25	22.77	24.33	25.95	27.62	11
12	15.91	17.21	18.56	19.95	21.40	22.89	24.43	26.02	27.67	29.36	12
13	17.48	18.80	20.17	21.59	23.06	24.58	26.15	27.77	29.43	31.15	13
14	19.10	20.44	21.84	23.28	24.78	26.32	27.91	29.56	31.25	32.99	14
15	20.77	22.14	23.56	25.02	26.54	28.11	29.73	31.40	33.11	34.88	15
16	22.48	23.83	25.32	26.81	28.36	29.95	31.59	33.28	35.02	36.81	16
17	24.25	25.67	27.14	28.65	30.22	31.84	33.51	35.22	36.99	38.80	17
18	26.06	27.51	29.00	30.54	32.14	33.78	35.47	37.21	39.00	40.84	18
19	27.93	29.40	30.91	32.48	34.10	35.77	37.48	39.25	41.06	42.93	19
20	29.84	31.33	32.88	34.47	36.11	37.80	39.54	41.33	43.17	45.06	20
21	31.80	33.32	34.89	36.51	38.17	39.89	41.65	43.47	45.33	47.25	21
22	33.82	35.36	36.95	38.59	40.28	42.02	43.81	45.65	47.54	49.48	22
23	35.88	37.44	39.06	40.73	42.44	44.21	46.02	47.89	49.80	51.77	23
24	37.99	39.58	41.22	42.91	44.65	46.44	48.28	50.17	52.11	54.10	24
25	40.15	41.77	43.43	45.15	46.91	48.73	50.59	52.51	54.47	56.48	25
26	42.36	44.00	45.69	47.43	49.22	51.06	52.95	54.89	56.88	58.91	26
27	44.62	46.28	48.00	49.77	51.58	53.44	55.36	57.32	59.33	61.40	27
28	46.93	48.62	50.36	52.15	53.99	55.88	57.81	59.80	61.84	63.93	28
29	49.28	51.00	52.77	54.58	56.44	58.36	60.32	62.33	64.40	66.51	29
30	51.69	53.43	55.22	57.06	58.95	60.89	62.88	64.91	67.00	69.14	30
31	54.15	55.91	57.73	59.59	61.51	63.47	65.48	67.54	69.65	71.81	31
32	56.65	58.44	60.28	62.17	64.11	66.10	68.14	70.22	72.36	74.54	32
33	59.21	61.02	62.89	64.80	66.77	68.78	70.84	72.95	75.11	77.32	33
34	61.81	63.65	65.54	67.48	69.47	71.51	73.59	75.73	77.91	80.15	34
35	64.47	66.33	68.25	70.21	72.22	74.28	76.40	78.56	80.77	83.02	35
36	67.17	69.06	71.00	72.99	75.02	77.11	79.25	81.43	83.67	85.95	36
37	69.93	71.84	73.80	75.81	77.88	79.99	82.15	84.36	86.62	88.93	37
38	72.73	74.67	76.65	78.69	80.78	82.91	85.10	87.33	89.62	91.95	38
39	75.58	77.54	79.56	81.62	83.73	85.89	88.10	90.36	92.67	95.02	39
40	78.48	80.47	82.51	84.59	86.73	88.91	91.15	93.43	95.77	98.15	40
41	81.43	83.44	85.51	87.62	89.78	91.99	94.25	96.56	98.91	101.32	41
42	84.43	86.47	88.56	90.69	92.88	95.11	97.40	99.73	102.11	104.54	42
43	87.48	89.54	91.65	93.81	96.02	98.28	100.59	102.95	105.36	107.81	43
44	90.58	92.67	94.80	96.99	99.22	101.51	103.84	106.22	108.65	111.14	44
45	93.73	95.84	98.00	100.21	102.47	104.78	107.14	109.54	112.00	114.51	45
46	96.93	99.06	101.25	103.48	105.77	108.10	110.48	112.91	115.40	117.93	46
47	100.17	102.33	104.54	106.80	109.11	111.47	113.88	116.33	118.84	121.40	47
48	103.47	105.65	107.89	110.17	112.51	114.89	117.32	119.80	122.33	124.91	48
49	106.81	109.02	111.28	113.59	115.95	118.36	120.81	123.32	125.88	128.48	49
50	110.21	112.44	114.73	117.06	119.44	121.88	124.36	126.89	129.47	132.10	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XIV.—BASE 50—SLOPES 2 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	13.70	14.67	16.21	17.80	19.44	21.14	22.88	24.67	26.51	28.40	0
1	14.40	15.91	17.48	19.10	20.77	22.48	24.25	26.06	27.93	29.84	1
2	15.67	17.21	18.80	20.44	22.14	23.83	25.67	27.51	29.40	31.33	2
3	16.99	18.56	20.17	21.84	23.56	25.32	27.14	29.00	30.91	32.88	3
4	18.36	19.95	21.59	23.28	25.02	26.81	28.65	30.54	32.48	34.47	4
5	19.78	21.40	23.06	24.78	26.54	28.36	30.22	32.14	34.10	36.11	5
6	21.25	22.89	24.58	26.32	28.11	29.95	31.84	33.78	35.77	37.80	6
7	22.77	24.43	26.15	27.91	29.73	31.59	33.51	35.47	37.48	39.54	7
8	24.33	26.02	27.77	29.56	31.40	33.28	35.22	37.21	39.25	41.33	8
9	25.95	27.67	29.43	31.25	33.11	35.02	36.99	39.00	41.06	43.17	9
10	27.62	29.36	31.15	32.99	34.88	36.81	38.80	40.84	42.93	45.06	10
11	29.33	31.10	32.91	34.78	36.69	38.65	40.67	42.73	44.84	47.00	11
12	31.10	32.89	34.73	36.62	38.56	40.54	42.58	44.67	46.80	48.99	12
13	32.91	34.73	36.59	38.51	40.47	42.48	44.54	46.65	48.81	51.02	13
14	34.78	36.62	38.51	40.44	42.43	44.47	46.56	48.69	50.88	53.11	14
15	36.69	38.56	40.47	42.43	44.44	46.51	48.62	50.78	52.99	55.25	15
16	38.65	40.54	42.48	44.47	46.51	48.59	50.73	52.91	55.15	57.43	16
17	40.67	42.58	44.54	46.56	48.62	50.73	52.89	55.10	57.36	59.67	17
18	42.73	44.67	46.65	48.69	50.78	52.91	55.10	57.33	59.62	61.95	18
19	44.84	46.80	48.81	50.88	52.99	55.15	57.36	59.62	61.93	64.28	19
20	47.00	48.99	51.02	53.11	55.25	57.43	59.67	61.95	64.28	66.67	20
21	49.21	51.22	53.28	55.40	57.56	59.77	62.02	64.33	66.69	69.10	21
22	51.47	53.51	55.59	57.73	59.91	62.15	64.43	66.77	69.15	71.58	22
23	53.78	55.84	57.95	60.11	62.32	64.58	66.89	69.25	71.65	74.11	23
24	56.14	58.22	60.36	62.54	64.78	67.06	69.40	71.78	74.21	76.69	24
25	58.54	60.65	62.81	65.02	67.28	69.59	71.95	74.36	76.81	79.32	25
26	61.00	63.14	65.32	67.56	69.84	72.17	74.56	76.99	79.47	82.00	26
27	63.51	65.67	67.88	70.14	72.44	74.80	77.21	79.67	82.17	84.73	27
28	66.06	68.25	70.48	72.77	75.10	77.48	79.91	82.40	84.93	87.51	28
29	68.67	70.88	73.14	75.44	77.80	80.21	82.67	85.17	87.73	90.33	29
30	71.32	73.56	75.84	78.17	80.56	82.99	85.47	88.00	90.58	93.21	30
31	74.02	76.28	78.59	80.95	83.36	85.81	88.32	90.88	93.48	96.14	31
32	76.78	79.06	81.40	83.78	86.21	88.69	91.22	93.80	96.43	99.11	32
33	79.58	81.89	84.25	86.65	89.11	91.62	94.17	96.78	99.43	104.14	33
34	82.43	84.77	87.15	89.58	92.06	94.59	97.17	99.80	102.48	105.21	34
35	85.33	87.69	90.10	92.56	95.06	97.62	100.22	102.88	105.58	108.33	35
36	88.28	90.67	93.10	95.58	98.11	100.69	103.32	106.00	108.73	111.51	36
37	91.28	93.69	96.15	98.65	101.21	103.81	106.47	109.17	111.93	114.73	37
38	94.33	96.77	99.25	101.78	104.36	106.99	109.67	112.40	115.17	118.00	38
39	97.43	99.89	102.40	104.95	107.56	110.21	112.91	115.67	118.47	121.32	39
40	100.58	103.06	105.59	108.17	110.80	113.48	116.21	118.99	121.81	124.69	40
41	103.78	106.28	108.84	111.44	114.10	116.80	119.56	122.36	125.21	128.11	41
42	107.02	109.56	112.14	114.77	117.44	120.17	122.95	125.78	128.65	131.58	42
43	110.32	112.88	115.48	118.14	120.84	123.59	126.40	129.25	132.15	135.10	43
44	113.67	116.25	118.88	121.56	124.28	127.06	129.89	132.77	135.69	138.67	44
45	117.06	119.67	122.32	125.02	127.78	130.58	133.43	136.33	139.28	142.28	45
46	120.51	123.14	125.81	128.54	131.32	134.15	137.02	139.95	142.93	145.95	46
47	124.00	126.65	129.36	132.11	134.91	137.77	140.67	143.62	146.62	149.67	47
48	127.54	130.22	132.95	135.73	138.56	141.43	144.36	147.33	150.36	153.43	48
49	131.14	133.84	136.59	139.40	142.25	145.15	148.10	151.10	154.15	157.25	49
50	134.78	137.51	140.28	143.11	145.99	148.91	151.89	154.91	157.99	161.11	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XIV.—BASE 50—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	30.33	32.32	34.36	36.44	38.58	40.77	43.00	45.28	47.62	50.00	0
1	31.80	33.82	35.88	37.99	40.15	42.36	44.62	46.93	49.28	51.69	1
2	33.32	35.36	37.44	39.58	41.77	44.00	46.28	48.62	51.00	53.43	2
3	34.89	36.95	39.06	41.22	43.43	45.69	48.00	50.36	52.77	55.22	3
4	36.51	38.59	40.73	42.91	45.15	47.43	49.77	52.15	54.58	57.06	4
5	38.17	40.28	42.44	44.65	46.91	49.22	51.58	55.99	56.44	58.95	5
6	39.89	42.02	44.21	46.44	48.73	51.06	53.44	55.88	58.36	60.89	6
7	41.65	43.81	46.02	48.28	50.59	52.95	55.36	57.81	60.32	62.88	7
8	43.47	45.65	47.89	50.17	52.51	54.89	57.32	59.80	62.33	64.91	8
9	45.33	47.54	49.80	52.11	54.47	56.88	59.33	61.84	64.40	67.00	9
10	47.25	49.48	51.77	54.10	56.48	58.91	61.40	63.93	66.51	69.14	10
11	49.21	51.47	53.78	56.14	58.54	61.00	63.51	66.06	68.67	71.32	11
12	51.22	53.51	55.84	58.22	60.65	63.14	65.67	68.25	70.88	73.56	12
13	53.28	55.59	57.95	60.36	62.81	65.32	67.88	70.48	73.14	75.84	13
14	55.40	57.73	60.11	62.54	65.02	67.56	70.14	72.77	75.44	78.17	14
15	57.56	59.91	62.32	64.78	67.28	69.84	72.44	75.10	77.80	80.56	15
16	59.77	62.15	64.58	67.06	69.59	72.17	74.80	77.48	80.21	82.99	16
17	62.02	64.43	66.89	69.40	71.95	74.56	77.21	79.91	82.67	85.47	17
18	64.33	66.77	69.25	71.78	74.36	76.99	79.67	82.40	85.17	88.00	18
19	66.69	69.15	71.65	74.21	76.81	79.47	82.17	84.93	87.73	90.58	19
20	69.10	71.58	74.11	76.69	79.32	82.00	84.73	87.51	90.33	93.21	20
21	71.56	74.06	76.62	79.22	81.88	84.58	87.33	90.14	92.99	95.89	21
22	74.06	76.59	79.17	81.80	84.48	87.21	89.99	92.81	95.69	98.62	22
23	76.62	79.17	81.78	84.43	87.14	89.89	92.69	95.54	98.44	101.40	23
24	79.22	81.80	84.43	87.11	89.84	92.62	95.44	98.32	101.25	104.22	24
25	81.88	84.48	87.14	89.84	92.59	95.40	98.25	101.15	104.10	107.10	25
26	84.58	87.21	89.89	92.62	95.40	98.22	101.10	104.02	107.00	110.02	26
27	87.35	89.99	92.69	95.44	98.25	101.10	104.00	106.95	109.95	113.00	27
28	90.14	92.81	95.54	98.32	101.15	104.02	106.95	109.93	112.95	116.02	28
29	92.99	95.69	98.44	101.25	104.10	107.00	109.95	112.95	116.00	119.10	29
30	95.89	98.62	101.40	104.22	107.10	110.02	113.00	116.02	119.10	122.22	30
31	98.84	101.59	104.40	107.25	110.15	113.10	116.10	119.15	122.25	125.40	31
32	101.84	104.62	107.44	110.32	113.25	116.22	119.25	122.32	125.44	128.62	32
33	104.89	107.69	110.54	113.44	116.40	119.40	122.44	125.54	128.69	131.89	33
34	107.99	110.81	113.69	116.62	119.59	122.62	125.69	128.81	131.99	135.21	34
35	111.14	113.99	116.89	119.84	122.84	125.89	128.99	132.14	135.33	138.58	35
36	114.33	117.21	120.14	123.11	126.14	129.21	132.33	135.51	138.73	142.00	36
37	117.58	120.48	123.43	126.43	129.48	132.58	135.73	138.93	142.17	145.47	37
38	120.88	123.80	126.78	129.80	132.88	136.00	139.17	142.40	145.67	148.99	38
39	124.22	127.17	130.17	133.22	136.32	139.47	142.67	145.91	149.21	152.56	39
40	127.62	130.59	133.62	136.69	139.81	142.99	146.21	149.48	152.80	156.17	40
41	131.06	134.06	137.11	140.21	143.36	146.56	149.80	153.10	156.44	159.84	41
42	134.56	137.58	140.65	143.78	146.95	150.17	153.44	156.77	160.14	163.56	42
43	138.10	141.15	144.25	147.40	150.59	153.84	157.14	160.48	163.88	167.32	43
44	141.69	144.77	147.89	151.06	154.28	157.56	160.88	164.25	167.67	171.14	44
45	145.33	148.43	151.58	154.78	158.02	161.32	164.67	168.06	171.51	175.00	45
46	149.02	152.15	155.32	158.54	161.81	165.14	168.51	171.93	175.40	178.91	46
47	152.77	155.91	159.11	162.36	165.65	169.00	172.40	175 84	179.33	182.88	47
48	156.56	159.73	162.95	166.22	169.54	172.91	176.33	179.80	183.32	186.89	48
49	160.40	163.59	166.84	170.14	173.48	176.88	180.32	183.81	186.36	190.95	49
50	164.28	167.51	170.78	174.10	177.47	180.89	184.36	187.88	190.44	195.06	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XIV.—BASE 50—SLOPES 2 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	52.43	54.91	57.44	60.02	62.65	65.33	68.06	70.84	73.67	76.54	0
1	54.15	56.65	59.21	61.81	64.47	67.17	69.93	72.73	75.58	78.48	1
2	55.91	58.44	61.02	63.65	66.33	69.06	71.84	74.67	77.54	80.47	2
3	57.73	60.28	62.89	65.54	68.25	71.00	73.80	76.65	79.56	82.51	3
4	59.59	62.17	64.80	67.48	70.21	72.99	75.81	78.69	81.62	84.59	4
5	61.51	64.11	66.77	69.47	72.22	75.02	77.88	80.78	83.73	86.73	5
6	63.47	66.10	68.78	71.51	74.28	77.11	79.99	82.91	85.89	88.91	6
7	65.48	68.14	70.84	73.59	76.40	79.25	82.15	85.10	88.10	91.15	7
8	67.54	70.22	72.95	75.73	78.56	81.43	84.36	87.33	90.36	93.43	8
9	69.65	72.36	75.11	77.91	80.77	83.67	86.62	89.62	92.67	95.77	9
10	71.81	74.54	77.32	80.15	83.02	85.95	88.93	91.95	95.02	98.15	10
11	74.02	76.78	79.58	82.43	85.33	88.28	91.28	94.33	97.43	100.58	11
12	76.28	79.06	81.89	84.77	87.69	90.67	93.69	96.77	99.89	103.06	12
13	78.59	81.40	84.25	87.15	90.10	93.10	96.15	99.25	102.40	105.59	13
14	80.95	83.78	86.65	89.58	92.56	95.58	98.65	101.78	104.95	108.17	14
15	83.36	86.21	89.11	92.06	95.06	98.11	101.21	104.36	107.56	110.80	15
16	85.81	88.69	91.62	94.59	97.62	100.69	103.81	106.99	110.21	113.48	16
17	88.32	91.22	94.17	97.17	100.22	103.32	106.47	109.67	112.91	116.21	17
18	90.88	93.80	96.78	99.80	102.88	106.00	109.17	112.40	115.67	118.99	18
19	93.48	96.43	99.43	102.48	105.58	108.73	111.93	115.17	118.47	121.81	19
20	96.14	99.11	102.14	105.21	108.33	111.51	114.73	118.00	121.32	124.69	20
21	98.84	101.84	104.89	107.99	111.14	114.33	117.58	120.88	124.22	127.62	21
22	101.59	104.62	107.69	110.81	113.99	117.21	120.48	123.80	127.17	130.59	22
23	104.40	107.44	110.54	113.69	116.89	120.14	123.43	126.78	130.17	133.62	23
24	107.25	110.32	113.44	116.62	119.84	123.11	126.43	129.80	133.22	136.69	24
25	110.15	113.25	116.40	119.59	122.84	126.14	129.48	132.88	136.32	139.81	25
26	113.10	116.22	119.40	122.62	125.89	129.21	132.58	136.00	139.47	142.99	26
27	116.10	119.25	122.44	125.69	128.99	132.33	135.73	139.17	142.67	146.21	27
28	119.15	122.32	125.54	128.81	132.14	135.51	138.93	142.40	145.91	149.48	28
29	122.25	125.44	128.69	131.99	135.33	138.73	142.17	145.67	149.21	152.80	29
30	125.40	128.62	131.89	135.21	138.58	142.00	145.47	148.99	152.56	156.17	30
31	128.59	131.84	135.14	138.48	141.88	145.32	148.81	152.36	155.95	159.59	31
32	131.84	135.11	138.43	141.80	145.22	148.69	152.21	155.78	159.40	163.06	32
33	135.14	138.43	141.78	145.17	148.62	152.11	155.65	159.25	162.89	166.58	33
34	138.48	141.80	145.17	148.59	152.06	155.58	159.15	162.77	166.43	170.15	34
35	141.88	145.22	148.62	152.06	155.56	159.10	162.69	166.33	170.02	173.77	35
36	145.32	148.69	152.11	155.58	159.10	162.67	166.28	169.95	173.67	177.43	36
37	148.81	152.21	155.65	159.15	162.69	166.28	169.93	173.62	177.36	181.15	37
38	152.36	155.78	159.25	162.77	166.33	169.95	173.62	177.33	181.10	184.91	38
39	155.95	159.40	162.89	166.43	170.02	173.67	177.36	181.10	184.89	188.73	39
40	159.59	163.06	166.58	170.15	173.77	177.43	181.15	184.91	188.73	192.59	40
41	163.28	166.78	170.32	173.91	177.56	181.25	184.99	188.78	192.62	196.51	41
42	167.02	170.54	174.11	177.73	181.40	185.11	188.88	192.69	196.56	200.47	42
43	170.81	174.36	177.95	181.59	185.28	189.02	192.81	196.65	200.54	204.48	43
44	174.65	178.22	181.84	185.51	189.23	192.99	196.80	200.67	204.58	208.54	44
45	178.54	182.14	185.78	189.47	193.21	197.00	200.84	204.73	208.67	212.65	45
46	182.48	186.10	189.77	193.48	197.25	201.06	204.93	208.84	212.80	216.81	46
47	186.47	190.11	193.80	197.54	201.33	205.17	209.06	213.00	216.99	221.02	47
48	190.51	194.17	197.89	201.65	205.47	209.33	213.25	217.21	221.22	225.28	48
49	194.59	198.28	202.02	205.81	209.65	213.54	217.48	221.47	225.51	229.59	49
50	198.73	202.44	206.21	210.02	213.89	217.80	221.77	225.78	229.84	233.95	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XIV.—BASE 50—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	79.47	82.44	85.47	88.54	91.67	94.84	98.06	101.33	104.65	108.02	0
1	81.43	84.43	87.48	90.58	93.73	96.93	100.17	103.47	106.81	110.21	1
2	83.44	86.47	89.54	92.67	95.84	99.06	102.33	105.65	109.02	112.44	2
3	85.51	88.56	91.65	94.80	98.00	101.25	104.54	107.89	111.28	114.73	3
4	87.62	90.69	93.81	96.99	100.21	103.48	106.80	110.17	113.59	117.06	4
5	89.78	92.88	96.02	99.22	102.47	105.77	109.11	112.51	115.95	119.44	5
6	91.99	95.11	98.28	101.51	104.78	108.10	111.47	114.89	118.36	121.88	6
7	94.25	97.40	100.59	103.84	107.14	110.48	113.88	117.32	120.81	124.36	7
8	96.56	99.73	102.95	106.22	109.54	112.91	116.33	119.80	123.32	126.89	8
9	98.91	102.11	105.36	108.65	112.00	115.40	118.84	122.33	125.88	129.47	9
10	101.32	104.54	107.81	111.14	114.51	117.93	121.40	124.91	128.48	132.10	10
11	103.78	107.02	110.32	113.67	117.06	120.51	124.00	127.54	131.14	134.78	11
12	106.28	109.56	112.88	116.25	119.67	123.14	126.65	130.22	133.84	137.51	12
13	108.84	112.14	115.48	118.88	122.32	125.81	129.36	132.95	136.59	140.28	13
14	111.44	114.77	118.14	121.56	125.02	128.54	132.11	135.73	139.40	143.11	14
15	114.10	117.44	120.84	124.28	127.78	131.32	134.91	138.56	142.25	145.99	15
16	116.80	120.17	123.59	127.06	130.58	134.15	137.77	141.43	145.15	148.91	16
17	119.56	122.95	126.40	129.89	133.43	137.02	140.67	144.36	148.10	151.89	17
18	122.36	125.78	129.25	132.77	136.33	139.95	143.62	147.33	151.10	154.91	18
19	125.21	128.65	132.15	135.69	139.28	142.93	146.62	150.36	154.15	157.99	19
20	128.11	131.58	135.10	138.67	142.28	145.95	149.67	153.43	157.25	161.11	20
21	131.06	134.56	138.10	141.69	145.33	149.02	152.77	156.56	160.40	164.28	21
22	134.06	137.58	141.15	144.77	148.43	152.15	155.91	159.73	163.59	167.51	22
23	137.11	140.65	144.25	147.89	151.58	155.32	159.11	162.95	166.84	170.78	23
24	140.21	143.78	147.40	151.06	154.78	158.54	162.36	166.22	170.14	174.10	24
25	143.36	146.95	150.59	154.28	158.02	161.81	165.65	169.54	173.48	177.47	25
26	146.56	150.17	153.84	157.56	161.32	165.14	169.00	172.91	176.88	180.89	26
27	149.80	153.44	157.14	160.88	164.67	168.51	172.40	176.33	180.32	184.36	27
28	153.10	156.77	160.48	164.25	168.06	171.93	175.84	179.80	183.81	187.88	28
29	156.44	160.14	163.88	167.67	171.51	175.40	179.33	183.32	186.36	190.44	29
30	159.84	163.56	167.32	171.14	175.00	178.91	182.88	186.89	190.95	195.06	30
31	163.28	167.02	170.81	174.65	178.54	182.48	186.47	190.51	194.59	198.73	31
32	166.78	170.54	174.36	178.22	182.14	186.10	190.11	194.17	198.28	202.44	32
33	170.32	174.11	177.95	181.84	185.78	189.77	193.80	197.89	202.02	206.21	33
34	173.91	177.73	181.59	185.51	189.47	193.48	197.54	201.65	205.81	210.02	34
35	177.56	181.40	185.28	189.22	193.21	197.25	201.33	205.47	209.65	213.89	35
36	181.25	185.11	189.02	192.99	197.00	201.06	205.17	209.33	213.54	217.80	36
37	184.99	188.88	192.81	196.80	200.84	204.93	209.06	213.25	217.48	221.77	37
38	188.78	192.69	196.65	200.67	204.73	208.84	213.00	217.21	221.47	225.78	38
39	192.62	196.56	200.54	204.58	208.67	212.80	216.99	221.22	225.51	229.84	39
40	196.51	200.47	204.48	208.54	212.65	216.81	221.02	225.28	229.59	233.95	40
41	200.44	204.43	208.47	212.56	216.69	220.88	225.11	229.40	233.73	238.11	41
42	204.43	208.44	212.51	216.62	220.78	224.99	229.25	233.56	237.91	242.32	42
43	208.47	212.51	216.59	220.73	224.91	229.15	233.43	237.77	242.15	246.58	43
44	212.56	216.62	220.73	224.89	229.10	233.36	237.67	242.02	246.43	250.89	44
45	216.69	220.78	224.91	229.10	233.33	237.62	241.95	246.33	250.77	255.25	45
46	220.88	224.99	229.15	233.36	237.62	241.93	246.28	250.69	255.15	259.65	46
47	225.11	229.25	233.43	237.67	241.95	246.28	250.67	255.10	259.58	264.11	47
48	229.40	233.56	237.77	242.02	246.33	250.69	255.10	259.56	264.06	268.62	48
49	233.73	237.91	242.15	246.43	250.77	255.15	259.58	264.06	268.59	273.17	49
50	238.11	242.32	246.58	250.89	255.25	259.65	264.11	268.62	273.17	277.78	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XV.—BASE 28—SLOPES 2½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.55	1.16	1.83	2.57	3.36	4.22	5.14	6.12	7.17	8.27	0
1	1.13	1.77	2.48	3.24	4.07	4.96	5.91	6.92	7.99	9.13	1
2	1.77	2.44	3.18	3.98	4.83	5.75	6.73	7.78	8.88	10.05	2
3	2.48	3.18	3.94	4.77	5.66	6.61	7.62	8.70	9.83	11.03	3
4	3.24	3.98	4.77	5.63	6.55	7.53	8.57	9.68	10.85	12.07	4
5	4.07	4.83	5.66	6.55	7.50	8.51	9.59	10.72	11.92	13.18	5
6	4.96	5.75	6.61	7.53	8.51	9.56	10.66	11.83	13.06	14.35	6
7	5.91	6.73	7.62	8.57	9.59	10.66	11.80	12.99	14.25	15.57	7
8	6.92	7.78	8.70	9.68	10.72	11.83	12.99	14.22	15.51	16.86	8
9	7.99	8.88	9.83	10.85	11.92	13.06	14.25	15.51	16.83	18.22	9
10	9.13	10.05	11.03	12.07	13.18	14.35	15.57	16.86	18.22	19.63	10
11	10.35	11.28	12.29	13.36	14.50	15.70	16.96	18.28	19.66	21.10	11
12	11.59	12.57	13.61	14.72	15.88	17.11	18.40	19.75	21.17	22.64	12
13	12.91	13.92	14.99	16.13	17.33	18.59	19.91	21.29	22.73	24.24	13
14	14.29	15.33	16.44	17.60	18.83	20.12	21.48	22.89	24.36	25.90	14
15	15.73	16.81	17.94	19.14	20.40	21.72	23.10	24.55	26.06	27.62	15
16	17.24	18.35	19.51	20.74	22.03	23.38	24.80	26.27	27.81	29.41	16
17	18.81	19.94	21.14	22.40	23.72	25.10	26.55	28.06	29.62	31.25	17
18	20.44	21.60	22.83	24.12	25.48	26.89	28.36	29.90	31.50	33.16	18
19	22.13	23.33	24.59	25.91	27.29	28.73	30.24	31.81	33.44	35.13	19
20	23.88	25.11	26.40	27.75	29.17	30.64	32.18	33.78	35.44	37.16	20
21	25.70	26.96	28.28	29.66	31.10	32.61	34.18	35.81	37.50	39.25	21
22	27.57	28.86	30.22	31.63	33.10	34.64	36.24	37.90	39.62	41.41	22
23	29.51	30.83	32.22	33.66	35.17	36.73	38.36	40.06	41.81	43.62	23
24	31.51	32.86	34.28	35.75	37.29	38.89	40.55	42.27	44.06	45.90	24
25	33.57	34.96	36.40	37.91	39.48	41.10	42.80	44.55	46.36	48.24	25
26	35.70	37.11	38.59	40.12	41.72	43.38	45.10	46.89	48.73	50.64	26
27	37.88	39.33	40.83	42.40	44.03	45.72	47.48	49.29	51.17	53.10	27
28	40.13	41.60	43.14	44.74	46.40	48.12	49.91	51.75	53.66	55.63	28
29	42.44	43.94	45.51	47.14	48.83	50.59	52.40	54.28	56.22	58.22	29
30	44.81	46.35	47.94	49.60	51.33	53.11	54.96	56.86	58.83	60.86	30
31	47.24	48.81	50.44	52.13	53.88	55.70	57.57	59.51	61.51	63.57	31
32	49.73	51.33	52.99	54.72	56.50	58.35	60.25	62.22	64.25	66.35	32
33	52.29	53.92	55.61	57.36	59.18	61.06	62.99	64.99	67.06	69.18	33
34	54.91	56.57	58.29	60.07	61.92	63.83	65.80	67.83	69.92	72.07	34
35	57.59	59.28	61.03	62.85	64.72	66.66	68.66	70.72	72.85	75.03	35
36	60.33	62.05	63.83	65.68	67.59	69.56	71.59	73.68	75.83	78.05	36
37	63.13	64.88	66.70	68.57	70.51	72.51	74.57	76.70	78.88	81.13	37
38	65.99	67.78	69.62	71.53	73.50	75.53	77.62	79.78	81.99	84.27	38
39	68.92	70.73	72.61	74.55	76.55	78.61	80.73	82.92	85.17	87.48	39
40	71.91	73.15	75.66	77.63	79.66	81.75	83.91	86.12	88.40	90.74	40
41	74.96	76.83	78.77	80.77	82.83	84.96	87.14	89.39	91.70	94.07	41
42	78.07	79.97	81.94	83.98	86.07	88.22	90.44	92.72	95.06	97.46	42
43	81.24	83.18	85.18	87.24	89.36	91.55	93.80	96.10	98.48	100.91	43
44	84.48	86.44	88.48	90.57	92.72	94.94	97.22	99.56	101.96	104.42	44
45	87.77	89.77	91.83	93.96	96.14	98.39	100.70	103.07	105.50	107.99	45
46	91.13	93.16	95.25	97.41	99.62	101.90	104.24	106.64	109.10	111.63	46
47	94.55	96.61	98.73	100.92	103.17	105.48	107.85	110.28	112.77	115.33	47
48	98.03	100.12	102.28	104.49	106.77	109.11	111.51	113.98	116.50	119.09	48
49	101.57	103.70	105.88	108.13	110.44	112.81	115.24	117.73	120.29	122.91	49
50	105.18	107.33	109.55	111.83	114.17	116.57	119.03	121.56	124.14	126.79	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XV.—BASE 28—SLOPES 2½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.44	10.67	11.96	13.31	14.72	16.20	17.73	19.33	20.99	22.72	0
1	10.33	11.59	12.91	14.29	15.73	17.24	18.81	20.44	22.13	23.88	1
2	11.28	12.57	13.92	15.33	16.81	18.35	19.94	21.60	23.33	25.11	2
3	12.29	13.61	14.99	16.44	17.94	19.51	21.14	22.83	24.59	26.40	3
4	13.36	14.72	16.13	17.60	19.14	20.74	22.40	24.12	25.91	27.75	4
5	14.50	15.88	17.33	18.83	20.40	22.03	23.72	25.48	27.29	29.17	5
6	15.70	17.11	18.59	20.12	21.72	23.38	25.10	26.89	28.73	30.64	6
7	16.96	18.40	19.91	21.48	23.10	24.80	26.55	28.36	30.24	32.18	7
8	18.28	19.75	21.29	22.89	24.55	26.27	28.06	29.90	31.81	33.78	8
9	19.66	21.17	22.73	24.36	26.06	27.81	29.62	31.50	33.44	35.44	9
10	21.10	22.64	24.24	25.90	27.62	29.41	31.25	33.16	35.13	37.16	10
11	22.62	24.18	25.81	27.50	29.25	31.07	32.94	34.88	36.88	38.94	11
12	24.18	25.78	27.44	29.16	30.94	32.79	34.70	36.67	38.70	40.79	12
13	25.81	27.44	29.13	30.88	32.70	34.57	36.51	38.51	40.57	42.70	13
14	27.50	29.16	30.88	32.67	34.51	36.42	38.39	40.42	42.51	44.67	14
15	29.25	30.94	32.70	34.51	36.39	38.33	40.33	42.39	44.51	46.70	15
16	31.07	32.79	34.57	36.42	38.33	40.30	42.33	44.42	46.57	48.79	16
17	32.94	34.70	36.51	38.39	40.33	42.33	44.39	46.51	48.70	50.94	17
18	34.88	36.67	38.51	40.42	42.39	44.42	46.51	48.67	50.88	53.16	18
19	36.88	38.70	40.57	42.51	44.51	46.57	48.70	50.88	53.13	55.44	19
20	38.94	40.79	42.70	44.67	46.70	48.79	50.94	53.16	55.44	57.78	20
21	41.07	42.94	44.88	46.88	48.94	51.07	53.25	55.50	57.81	60.18	21
22	43.25	45.16	47.13	49.16	51.25	53.41	55.62	57.90	60.24	62.64	22
23	45.50	47.44	49.44	51.50	53.62	55.81	58.06	60.36	62.73	65.17	23
24	47.81	49.78	51.81	53.90	56.06	58.27	60.55	62.89	65.29	67.75	24
25	50.18	52.18	54.24	56.36	58.55	60.80	63.10	65.48	67.91	70.40	25
26	52.62	54.64	56.73	58.89	61.10	63.38	65.72	68.12	70.59	73.11	26
27	55.10	57.17	59.29	61.48	63.72	66.03	68.40	70.83	73.33	75.88	27
28	57.66	59.75	61.91	64.12	66.40	68.74	71.14	73.60	76.13	78.72	28
29	60.28	62.40	64.59	66.83	69.14	71.51	73.94	76.44	78.99	81.61	29
30	62.96	65.11	67.33	69.60	71.94	74.35	76.81	79.33	81.92	84.57	30
31	65.70	67.88	70.13	72.44	74.81	77.24	79.73	82.29	84.91	87.59	31
32	68.50	70.72	72.99	75.33	77.73	80.20	82.72	85.31	87.96	90.67	32
33	71.36	73.61	75.92	78.29	80.72	83.22	85.77	88.39	91.07	93.81	33
34	74.29	76.57	78.91	81.31	83.77	86.30	88.82	91.53	94.24	97.01	34
35	77.28	79.59	81.96	84.39	86.88	89.44	92.06	94.73	97.48	100.28	35
36	80.33	82.67	85.07	87.53	90.06	92.64	95.29	98.00	100.77	103.60	36
37	83.44	85.81	88.24	90.73	93.29	95.91	98.59	101.33	104.13	106.99	37
38	86.61	89.01	91.48	94.00	96.59	99.23	101.94	104.72	107.55	110.44	38
39	89.85	92.28	94.77	97.33	99.94	102.62	105.36	108.17	111.03	113.96	39
40	93.14	95.60	98.13	100.72	103.36	106.07	108.85	111.68	114.57	117.53	40
41	96.50	98.99	101.55	104.17	106.85	109.59	112.39	115.25	118.18	121.17	41
42	99.92	102.44	105.03	107.68	110.39	113.16	115.99	118.89	121.85	124.86	42
43	103.40	105.96	108.57	111.25	113.99	116.80	119.66	122.59	125.57	128.62	43
44	106.94	109.53	112.18	114.89	117.66	120.49	123.39	126.35	129.36	132.44	44
45	110.55	113.17	115.85	118.59	121.39	124.25	127.18	130.17	133.22	136.33	45
46	114.22	116.86	119.57	122.35	125.18	128.07	131.03	134.05	137.13	140.27	46
47	117.94	120.62	123.36	126.17	129.03	131.96	134.94	137.99	141.10	144.28	47
48	121.73	124.44	127.22	130.05	132.94	135.90	138.92	142.00	145.14	148.35	48
49	125.59	128.33	131.13	133.99	136.92	139.91	142.95	146.07	149.24	152.48	49
50	129.50	132.27	135.10	138.00	140.96	143.98	147.06	150.20	153.40	156.67	50
—	11	12	13	14	15	16	17	18	19	20	—

TABLE XV.—BASE 28—SLOPES 2½ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	24.50	26.35	28.25	30.22	32.25	34.35	36.50	38.72	40.99	43.33	0
1	25.70	27.57	29.51	31.51	33.57	35.70	37.88	40.13	42.44	44.81	1
2	26.96	28.86	30.83	32.86	34.96	37.11	39.33	41.60	43.94	46.35	2
3	28.28	30.22	32.22	34.28	36.40	38.59	40.83	43.14	45.51	47.94	3
4	29.66	31.63	33.66	35.75	37.91	40.12	42.40	44.74	47.14	49.60	4
5	31.10	33.10	35.17	37.29	39.48	41.72	44.03	46.40	48.83	51.33	5
6	32.61	34.64	36.73	38.89	41.10	43.38	45.72	48.12	50.59	53.11	6
7	34.18	36.24	38.36	40.55	42.80	45.10	47.48	49.91	52.40	54.96	7
8	35.81	37.90	40.06	42.27	44.55	46.89	49.29	51.75	54.28	56.86	8
9	37.50	39.62	41.81	44.06	46.36	48.73	51.17	53.66	56.22	58.83	9
10	39.25	41.41	43.62	45.90	48.24	50.64	53.10	55.63	58.22	60.86	10
11	41.07	43.25	45.50	47.81	50.18	52.61	55.10	57.66	60.28	62.96	11
12	42.94	45.16	47.44	49.78	52.18	54.64	57.17	59.75	62.40	65.11	12
13	44.88	47.13	49.44	51.81	54.24	56.73	59.29	61.91	64.59	67.33	13
14	46.88	49.16	51.50	53.90	56.36	58.89	61.48	64.12	66.83	69.60	14
15	48.94	51.25	53.62	56.06	58.55	61.10	63.72	66.40	69.14	71.94	15
16	51.07	53.41	55.81	58.27	60.80	63.38	66.03	68.74	71.51	74.35	16
17	53.25	55.62	58.06	60.55	63.10	65.72	68.40	71.14	73.94	76.81	17
18	55.50	57.90	60.36	62.89	65.48	68.12	70.83	73.60	76.44	79.33	18
19	57.81	60.24	62.73	65.29	67.91	70.59	73.33	76.13	78.99	81.92	19
20	60.18	62.64	65.17	67.75	70.40	73.11	75.88	78.72	81.61	84.57	20
21	62.61	65.10	67.66	70.28	72.96	75.70	78.50	81.36	84.29	87.28	21
22	65.10	67.63	70.22	72.86	75.57	78.35	81.18	84.07	87.03	90.05	22
23	67.66	70.22	72.83	75.51	78.25	81.06	83.92	86.85	89.83	92.88	23
24	70.28	72.86	75.51	78.22	80.99	83.83	86.72	89.68	92.70	95.78	24
25	72.96	75.57	78.25	80.99	83.80	86.66	89.59	92.57	95.62	98.73	25
26	75.70	78.35	81.06	83.83	86.66	89.56	92.51	95.53	98.61	101.75	26
27	78.50	81.18	83.92	86.72	89.59	92.51	95.50	98.55	101.65	104.83	27
28	81.36	84.07	86.85	89.68	92.57	95.53	98.55	101.63	104.77	107.98	28
29	84.29	87.03	89.83	92.70	95.62	98.61	101.65	104.77	107.94	111.18	29
30	87.28	90.05	92.88	95.78	98.73	101.75	104.83	107.98	111.18	114.44	30
31	90.33	93.13	95.99	98.92	101.91	104.96	108.07	111.24	114.48	117.77	31
32	93.44	96.27	99.17	102.12	105.14	108.22	111.36	114.57	117.83	121.16	32
33	96.61	99.48	102.40	105.39	108.44	111.55	114.72	117.96	121.25	124.61	33
34	99.85	102.74	105.70	108.72	111.80	114.94	118.14	121.41	124.73	128.12	34
35	103.14	106.07	109.06	112.10	115.22	118.39	121.62	124.92	128.28	131.70	35
36	106.50	109.46	112.48	115.56	118.70	121.90	125.17	128.49	131.88	135.33	36
37	109.92	112.91	115.95	119.07	122.24	125.48	128.77	132.13	135.55	139.03	37
38	113.40	116.42	119.50	122.64	125.85	129.11	132.44	135.83	139.28	142.79	38
39	116.94	119.99	123.10	126.28	129.51	132.81	136.17	139.59	143.07	146.61	39
40	120.55	123.63	126.77	129.98	133.24	136.57	139.96	143.41	146.92	150.49	40
41	124.22	127.33	130.50	133.73	137.03	140.39	143.81	147.29	150.83	154.44	41
42	127.94	131.09	134.29	137.57	140.88	144.27	147.72	151.23	154.81	158.44	42
43	131.73	134.91	138.14	141.44	144.80	148.22	151.70	155.24	158.85	162.51	43
44	135.59	138.79	142.06	145.38	148.77	152.22	155.73	159.31	162.94	166.64	44
45	139.50	142.73	146.03	149.39	152.81	156.29	159.83	163.44	167.10	170.85	45
46	143.48	146.74	150.07	153.46	156.91	160.42	163.99	167.63	171.33	175.09	46
47	147.51	150.81	154.17	157.59	161.07	164.61	168.22	171.88	175.61	179.40	47
48	151.61	154.94	158.33	161.78	165.29	168.86	172.50	176.20	179.96	183.78	48
49	155.77	159.13	162.55	166.03	169.57	173.18	176.85	180.57	184.36	188.22	49
50	159.99	163.38	166.83	170.35	173.92	177.56	181.25	185.01	188.83	192.72	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XV.—BASE 28—SLOPES 2½ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	45.73	48.20	50.72	53.31	55.96	58.67	61.44	64.27	67.17	70.12	0
1	47.24	49.73	52.29	54.91	57.59	60.33	63.13	65.99	68.92	71.91	1
2	48.81	51.33	53.92	56.57	59.28	62.05	64.88	67.78	70.73	73.75	2
3	50.44	52.99	55.61	58.29	61.03	63.83	66.70	69.62	72.61	75.66	3
4	52.13	54.72	57.36	60.07	62.85	65.68	68.57	71.53	74.55	77.63	4
5	53.88	56.50	59.18	61.92	64.72	67.59	70.51	73.50	76.55	79.66	5
6	55.70	58.35	61.06	63.83	66.66	69.56	72.51	75.53	78.61	81.75	6
7	57.57	60.25	62.99	65.80	68.66	71.59	74.57	77.62	80.73	83.91	7
8	59.51	62.22	64.99	67.83	70.72	73.68	76.70	79.78	82.92	86.12	8
9	61.51	64.25	67.06	69.92	72.85	75.83	78.88	81.99	85.17	88.40	9
10	63.57	66.35	69.18	72.07	75.03	78.05	81.13	84.27	87.48	90.74	10
11	65.70	68.50	71.36	74.29	77.28	80.33	83.44	86.61	89.85	93.14	11
12	67.88	70.72	73.61	76.57	79.59	82.67	85.81	89.01	92.28	95.60	12
13	70.13	72.99	75.92	78.91	81.96	85.07	88.24	91.48	94.77	98.13	13
14	72.44	75.33	78.29	81.31	84.39	87.53	90.73	94.00	97.33	100.72	14
15	74.81	77.73	80.72	83.77	86.88	90.06	93.29	96.59	99.94	103.36	15
16	77.24	80.20	83.22	86.30	89.44	92.64	95.91	99.23	102.62	106.07	16
17	79.73	82.72	85.77	88.82	92.06	95.29	98.59	101.94	105.36	108.85	17
18	82.29	85.31	88.39	91.53	94.73	98.00	101.33	104.72	108.17	111.68	18
19	84.91	87.96	91.07	94.24	97.48	100.77	104.13	107.55	111.03	114.57	19
20	87.59	90.67	93.81	97.01	100.28	103.60	106.99	110.44	113.96	117.53	20
21	90.33	93.44	96.61	99.85	103.14	106.50	109.92	113.40	116.94	120.55	21
22	93.13	96.27	99.48	102.74	106.07	109.46	112.91	116.42	119.99	123.63	22
23	95.99	99.17	102.40	105.70	109.06	112.48	115.95	119.50	123.10	126.77	23
24	98.92	102.12	105.39	108.72	112.10	115.56	119.07	122.64	126.28	129.98	24
25	101.91	105.14	108.44	111.80	115.22	118.70	122.24	125.85	129.51	133.24	25
26	104.96	108.22	111.55	114.94	118.39	121.90	125.48	129.11	132.81	136.57	26
27	108.07	111.36	114.72	118.14	121.62	125.17	128.77	132.44	136.17	139.96	27
28	111.24	114.57	117.96	121.41	124.92	128.49	132.13	135.83	139.59	143.41	28
29	114.48	117.83	121.25	124.73	128.28	131.88	135.55	139.28	143.07	146.92	29
30	117.77	121.16	124.61	128.12	131.70	135.33	139.03	142.79	146.61	150.49	30
31	121.13	124.55	128.03	131.57	135.18	138.85	142.57	146.36	150.22	154.13	31
32	124.55	128.00	131.51	135.09	138.72	142.42	146.18	150.00	153.88	157.83	32
33	128.03	131.51	135.06	138.66	142.33	146.06	149.85	153.70	157.61	161.59	33
34	131.57	135.09	138.66	142.30	145.99	149.75	153.57	157.46	161.40	165.41	34
35	135.18	138.72	142.33	145.99	149.72	153.51	157.36	161.28	165.25	169.29	35
36	138.85	142.42	146.06	149.75	153.51	157.33	161.22	165.16	169.17	173.23	36
37	142.57	146.18	149.85	153.57	157.36	161.22	165.13	169.10	173.14	177.24	37
38	146.36	150.00	153.70	157.46	161.28	165.16	169.10	173.11	177.18	181.31	38
39	150.22	153.88	157.61	161.40	165.25	169.17	173.14	177.18	181.28	185.44	39
40	154.13	157.83	161.59	165.41	169.29	173.23	177.24	181.31	185.44	189.63	40
41	158.10	161.83	165.62	169.48	173.39	177.36	181.40	185.50	189.66	193.88	41
42	162.14	165.90	169.72	173.60	177.55	181.56	185.62	189.73	193.94	198.20	42
43	166.24	170.03	173.88	177.80	181.77	185.81	189.91	194.07	198.29	202.57	43
44	170.40	174.22	178.10	182.05	186.06	190.12	194.25	198.44	202.70	207.01	44
45	174.62	178.48	182.39	186.36	190.40	194.50	198.66	202.88	207.17	211.51	45
46	178.91	182.79	186.73	190.74	194.81	198.94	203.13	207.38	211.70	216.07	46
47	183.25	187.17	191.14	195.18	199.28	203.44	207.66	211.94	216.29	220.70	47
48	187.66	191.60	195.61	199.68	203.81	208.00	212.25	216.57	220.94	225.38	48
49	192.13	196.10	200.14	204.24	208.40	212.62	216.91	221.25	225.66	230.13	49
50	196.66	200.67	204.75	208.86	213.06	217.31	221.62	226.00	230.44	234.94	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XV.—BASE 28—SLOPES $2\frac{1}{2}$ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	73.14	76.22	79.36	82.57	85.83	89.16	92.55	96.00	99.51	103.09	0
1	74.96	78.07	81.24	84.48	87.77	91.13	94.55	98.03	101.57	105.18	1
2	76.83	79.98	83.18	86.44	89.77	93.16	96.61	100.12	103.70	107.35	2
3	78.77	81.94	85.18	88.48	91.83	95.25	98.73	102.28	105.88	109.55	3
4	80.77	83.98	87.24	90.57	93.96	97.41	100.92	104.49	108.13	111.85	4
5	82.83	86.07	89.36	92.72	96.14	99.62	103.17	106.77	110.44	114.17	5
6	84.96	88.22	91.55	94.94	98.39	101.90	105.48	109.11	112.81	116.57	6
7	87.14	90.44	93.80	97.22	100.70	104.24	107.85	111.51	115.24	119.03	7
8	89.39	92.72	96.10	99.56	103.07	106.64	110.28	113.98	117.73	121.56	8
9	91.70	95.06	98.48	101.96	105.50	109.10	112.77	116.50	120.29	124.14	9
10	94.07	97.46	100.91	104.42	107.99	111.63	115.33	119.09	122.91	126.79	10
11	96.50	90.92	103.40	106.94	110.55	114.22	117.94	121.73	125.59	129.50	11
12	98.99	102.44	105.96	109.53	113.17	116.86	120.62	124.44	128.33	132.27	12
13	101.55	105.03	108.57	112.18	115.85	119.57	123.36	127.22	131.13	135.10	13
14	104.17	107.68	111.25	114.89	118.59	122.35	126.17	130.05	133.99	138.00	14
15	106.85	110.39	113.99	117.66	121.39	125.18	129.03	132.94	136.92	140.96	15
16	109.59	113.16	116.80	120.49	124.25	128.07	131.96	135.90	139.91	143.98	16
17	112.39	115.99	119.66	123.39	127.18	131.03	134.94	138.92	142.95	147.06	17
18	115.25	118.89	122.59	126.35	130.17	134.05	137.99	142.00	146.07	150.20	18
19	118.18	121.85	125.57	129.36	133.22	137.13	141.10	145.14	149.24	153.40	19
20	121.17	124.86	128.62	132.44	136.33	140.33	144.27	148.35	152.48	156.67	20
21	124.22	127.94	131.73	135.59	139.50	143.48	147.51	151.61	155.77	159.99	21
22	127.33	131.09	134.91	138.79	142.73	146.74	150.81	154.94	159.13	163.38	22
23	130.50	134.29	138.14	142.06	146.03	150.07	154.17	158.33	162.55	166.83	23
24	133.73	137.57	141.44	145.38	149.39	153.46	157.59	161.78	166.03	170.35	24
25	137.03	140.88	144.80	148.77	152.81	156.91	161.07	165.29	169.57	173.92	25
26	140.39	144.27	148.22	152.22	156.29	160.42	164.61	168.86	173.18	177.56	26
27	143.81	147.72	151.70	155.73	159.83	163.99	168.22	172.50	176.85	181.25	27
28	147.29	151.23	155.24	159.31	163.44	167.63	171.88	176.20	180.57	185.01	28
29	150.83	154.81	158.85	162.94	167.10	171.33	175.61	179.96	184.36	188.83	29
30	154.44	158.44	162.51	166.64	170.83	175.09	179.40	183.78	188.22	192.72	30
31	158.10	162.14	166.24	170.40	174.62	178.91	183.25	187.66	192.13	196.66	31
32	161.83	165.90	170.03	174.22	178.48	182.79	187.17	191.60	196.10	200.67	32
33	165.62	169.72	173.88	178.10	182.39	186.73	191.14	195.61	200.14	204.73	33
34	169.48	173.60	177.80	182.05	186.36	190.74	195.18	199.68	204.24	208.86	34
35	173.39	177.55	181.77	186.06	190.40	194.81	199.28	203.81	208.40	213.06	35
36	177.36	181.56	185.81	190.12	194.50	198.94	203.44	208.00	212.62	217.31	36
37	181.40	185.62	189.91	194.25	198.66	203.13	207.66	212.25	216.91	221.62	37
38	185.50	189.73	194.07	198.44	202.88	207.38	211.94	216.57	221.25	226.00	38
39	189.66	193.94	198.29	202.70	207.17	211.70	216.29	220.94	225.66	230.44	39
40	193.88	198.20	202.57	207.01	211.51	216.07	220.70	225.38	230.13	234.94	40
41	198.17	202.51	206.92	211.39	215.92	220.51	225.17	229.88	234.66	239.50	41
42	202.51	206.89	211.33	215.83	220.39	225.01	229.70	234.44	239.25	244.12	42
43	206.92	211.33	215.80	220.33	224.92	229.57	234.29	239.07	243.91	248.81	43
44	211.39	215.83	220.33	224.89	229.51	234.20	238.94	243.75	248.62	253.56	44
45	215.92	220.39	224.92	229.51	234.17	238.88	243.66	248.50	253.40	258.36	45
46	220.51	225.01	229.57	234.20	238.88	243.63	248.44	253.31	258.24	263.23	46
47	225.17	229.70	234.29	238.94	243.66	248.44	253.28	258.18	263.14	268.17	47
48	229.88	234.44	239.07	243.75	248.50	253.31	258.18	263.11	268.10	273.16	48
49	234.66	239.25	243.91	248.62	253.40	258.24	263.14	268.10	273.13	278.22	49
50	239.50	244.12	248.81	253.56	258.36	263.23	268.17	273.16	278.22	283.33	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XVI.—BASE 30—SLOPES 2½ to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.59	1.23	1.94	2.72	3.55	4.44	5.40	6.42	7.50	8.64	0
1	1.20	1.88	2.62	3.43	4.29	5.22	6.20	7.25	8.36	9.54	1
2	1.88	2.59	3.36	4.20	5.09	6.05	7.07	8.15	9.29	10.49	2
3	2.62	3.36	4.16	5.03	5.96	6.94	7.99	9.10	10.28	11.51	3
4	3.43	4.20	5.03	5.93	6.88	7.90	8.98	10.12	11.33	12.59	4
5	4.29	5.09	5.96	6.88	7.87	8.92	10.03	11.20	12.44	13.73	5
6	5.22	6.05	6.94	7.90	8.92	10.00	11.14	12.35	13.61	14.93	6
7	6.20	7.07	7.99	8.98	10.03	11.14	12.31	13.55	14.85	16.20	7
8	7.25	8.15	9.10	10.12	11.20	12.35	13.55	14.81	16.14	17.53	8
9	8.36	9.29	10.28	11.33	12.44	13.61	14.85	16.14	17.50	18.92	9
10	9.54	10.49	11.51	12.59	13.73	14.93	16.20	17.53	18.92	20.37	10
11	10.77	11.76	12.81	13.92	15.09	16.33	17.62	18.98	20.40	21.88	11
12	12.07	13.09	14.17	15.31	16.51	17.78	19.10	20.49	21.94	23.46	12
13	13.43	14.48	15.59	16.76	17.99	19.29	20.65	22.07	23.55	25.09	13
14	14.85	15.93	17.07	18.27	19.54	20.86	22.25	23.70	25.22	26.79	14
15	16.33	17.44	18.61	19.85	21.14	22.50	23.92	25.40	26.94	28.55	15
16	17.87	19.01	20.22	21.48	22.81	24.20	25.65	27.16	28.73	30.37	16
17	19.48	20.65	21.88	23.18	24.54	25.96	27.44	28.98	30.59	32.25	17
18	21.14	22.35	23.61	24.94	26.33	27.78	29.29	30.86	32.50	34.20	18
19	22.87	24.10	25.40	26.76	28.18	29.66	31.20	32.81	34.48	36.20	19
20	24.66	25.93	27.25	28.64	30.09	31.60	33.18	34.81	36.51	38.27	20
21	26.51	27.81	29.17	30.59	32.07	33.61	35.22	36.88	38.61	40.40	21
22	28.43	29.75	31.14	32.59	34.10	35.68	37.31	39.01	40.77	42.59	22
23	30.40	31.76	33.18	34.66	36.20	37.81	39.48	41.20	42.99	44.85	23
24	32.44	33.83	35.28	36.79	38.36	40.00	41.70	43.46	45.28	47.16	24
25	34.54	35.96	37.44	38.98	40.59	42.25	43.98	45.77	47.62	49.54	25
26	36.70	38.15	39.66	41.23	42.87	44.57	46.33	48.15	50.03	51.98	26
27	38.92	40.40	41.94	43.55	45.22	46.94	48.73	50.59	52.50	54.48	27
28	41.20	42.72	44.29	45.93	47.62	49.38	51.20	53.09	55.03	57.04	28
29	43.55	45.09	46.70	48.36	50.09	51.88	53.73	55.65	57.62	59.66	29
30	45.96	47.53	49.17	50.86	52.62	54.44	56.33	58.27	60.28	62.35	30
31	48.43	50.03	51.70	53.43	55.22	57.07	58.98	60.96	62.99	65.09	31
32	50.96	52.59	54.29	56.05	57.87	59.75	61.70	63.70	65.77	67.90	32
33	53.55	55.22	56.94	58.73	60.59	62.50	64.48	66.51	68.61	70.77	33
34	56.20	57.90	59.66	61.48	63.36	65.31	67.31	69.38	71.51	73.70	34
35	58.92	60.65	62.44	64.29	66.20	68.18	70.22	72.31	74.48	76.70	35
36	61.70	63.46	65.28	67.16	69.10	71.11	73.18	75.31	77.50	79.75	36
37	64.54	66.33	68.18	70.09	72.07	74.10	76.20	78.36	80.59	82.87	37
38	67.44	69.26	71.14	73.09	75.09	77.16	79.29	81.48	83.73	86.05	38
39	70.40	72.25	74.17	76.14	78.18	80.28	82.44	84.66	86.94	89.29	39
40	73.43	75.31	77.25	79.26	81.33	83.46	85.65	87.90	90.22	92.59	40
41	76.51	78.43	80.40	82.44	84.54	86.70	88.92	91.20	93.55	95.96	41
42	79.66	81.60	83.61	85.68	87.81	90.00	92.25	94.57	96.94	99.38	42
43	82.87	84.85	86.88	88.98	91.14	93.36	95.65	97.99	100.40	102.87	43
44	86.14	88.15	90.22	92.35	94.54	96.79	99.10	101.48	103.92	106.42	44
45	89.48	91.51	93.61	95.77	97.99	100.28	102.62	105.03	107.50	110.03	45
46	92.87	94.94	97.07	99.26	101.51	103.83	106.20	108.64	111.14	113.70	46
47	96.33	98.43	100.59	102.81	105.09	107.44	109.85	112.31	114.85	117.44	47
48	99.85	101.98	104.17	106.42	108.73	111.11	113.55	116.05	118.61	121.23	48
49	103.43	105.59	107.81	110.09	112.44	114.85	117.31	119.85	122.44	125.09	49
50	107.07	109.26	111.51	113.83	116.20	118.64	121.14	123.70	126.33	129.01	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XVI.—BASE 30—SLOPES 2½ to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.85	11.11	12.44	13.83	15.28	16.79	18.36	20.00	21.70	23.46	0
1	10.77	12.07	13.43	14.85	16.33	17.87	19.48	21.14	22.87	24.66	1
2	11.76	13.09	14.48	15.93	17.44	19.01	20.65	22.35	24.10	25.93	2
3	12.81	14.17	15.59	17.07	18.61	20.22	21.88	23.61	25.40	27.25	3
4	13.92	15.31	16.76	18.27	19.85	21.48	23.18	24.94	26.76	28.64	4
5	15.09	16.51	17.99	19.54	21.14	22.81	24.54	26.33	28.18	30.09	5
6	16.33	17.78	19.29	20.86	22.50	24.20	25.96	27.78	29.66	31.60	6
7	17.62	19.10	20.65	22.25	23.92	25.65	27.44	29.29	31.20	33.18	7
8	18.98	20.49	22.07	23.70	25.40	27.16	28.98	30.86	32.81	34.81	8
9	20.40	21.94	23.55	25.22	26.94	28.73	30.59	32.50	34.48	36.51	9
10	21.88	23.46	25.09	26.79	28.55	30.37	32.25	34.20	36.20	38.27	10
11	23.43	25.03	26.70	28.43	30.22	32.07	33.98	35.96	37.99	40.09	11
12	25.03	26.67	28.36	30.12	31.94	33.83	35.77	37.78	39.85	41.98	12
13	26.70	28.36	30.09	31.88	33.73	35.65	37.62	39.66	41.76	43.92	13
14	28.43	30.12	31.88	33.70	35.59	37.53	39.54	41.60	43.73	45.93	14
15	30.22	31.94	33.73	35.59	37.50	39.48	41.51	43.61	45.77	47.99	15
16	32.07	33.83	35.65	37.53	39.48	41.48	43.55	45.68	47.87	50.12	16
17	33.98	35.77	37.62	39.54	41.51	43.55	45.65	47.81	50.03	52.31	17
18	35.96	37.78	39.66	41.60	43.61	45.68	47.81	50.00	52.25	54.57	18
19	37.99	39.85	41.76	43.73	45.77	47.87	50.03	52.25	54.54	56.88	19
20	40.09	41.98	43.92	45.93	47.99	50.12	52.31	54.57	56.88	59.26	20
21	42.25	44.17	46.14	48.18	50.28	52.44	54.66	56.94	59.29	61.70	21
22	44.48	46.42	48.43	50.49	52.62	54.81	57.07	59.38	61.76	64.20	22
23	46.76	48.73	50.77	52.87	55.03	57.25	59.54	61.88	64.29	66.76	23
24	49.10	51.11	53.18	55.31	57.50	59.75	62.07	64.44	66.88	69.38	24
25	51.51	53.55	55.65	57.81	60.03	62.31	64.66	67.07	69.54	72.07	25
26	53.58	56.05	58.18	60.37	62.62	64.94	67 31	69.75	72.25	74.81	26
27	56.51	58.61	60.77	62.99	65.28	67.62	70.03	72.50	75.03	77.62	27
28	59.10	61.23	63.43	65.68	67.99	70.37	72.81	75.31	77.87	80.49	28
29	61.76	63.92	66.14	68.43	70.77	73.18	75.65	78.18	80.77	83.43	29
30	64.48	66.67	68.92	71.23	73.61	76.05	78.55	81.11	83.73	86.42	30
31	67.25	69.48	71.76	74.10	76.51	78.98	81.51	84.10	86.76	89.48	31
32	70.09	72.35	74.66	77.04	79.48	81.98	84.54	87.16	89.85	92.59	32
33	72.99	75.28	77.62	80.03	82.50	85.03	87.62	90.28	92.99	95.77	33
34	75.96	78.27	80.65	83.09	85.59	88.15	90.77	93.46	96.20	99.01	34
35	78.98	81.33	83.73	86.20	88.73	91.33	93.98	96.70	99.48	102.31	35
36	82.07	84.44	86.88	89.38	91.94	94.57	97.25	100.00	102.81	105.68	36
37	85.22	87.62	90.09	92.62	95.22	97.87	100.59	103.36	106.20	109.10	37
38	88.43	90.86	93.36	95.93	98.55	101.23	103.98	106.79	109.66	112.59	38
39	91.70	94.17	96.70	99.29	101.94	104.66	107.44	110.28	113.18	116.14	39
40	95.03	97.53	100.09	102.72	105.40	108.15	110.96	113.83	116.76	119.75	40
41	98.43	100.96	103.55	106.20	108.92	111.70	114.54	117.44	120.40	123.43	41
42	101.88	104.44	107.07	109.75	112.50	115.31	118.18	121.11	124.10	127.16	42
43	105.40	107.99	110.65	113.36	116.14	118.98	121.88	124.85	127.87	130.96	43
44	108.98	111.60	114.29	117.04	119.85	122.72	125.65	128.64	131.70	134.81	44
45	112.62	115.28	117.99	120.77	123.61	126.51	129.48	132.50	135.59	138.73	45
46	116.33	119.01	121.76	124.57	127.44	130.37	133.36	136.42	139.54	142.72	46
47	120.09	122.81	125.59	128.43	131.33	134.29	137.31	140.40	143.55	146.76	47
48	123.92	126.67	129.48	132.35	135.28	138.27	141.33	144.44	147.62	150.86	48
49	127.81	130.59	133.43	136.33	139.29	142.31	145.40	148.55	151.76	155.03	49
50	131.76	134.57	137.44	140.37	143.36	146.42	149.54	152.72	155.96	159.26	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XVI.—BASE 30—SLOPES $2\frac{1}{2}$ to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	25.28	27.16	29.10	31.11	33.18	35.31	37.50	39.75	42.07	44.44	0
1	26.51	28.43	30.40	32.44	34.54	36.70	38.92	41.20	43.55	45.96	1
2	27.81	29.75	31.76	33.83	35.96	38.15	40.40	42.72	45.09	47.53	2
3	29.17	31.14	33.18	35.28	37.44	39.66	41.94	44.29	46.70	49.17	3
4	30.59	32.59	34.66	36.79	38.98	41.23	43.55	45.93	48.36	50.86	4
5	32.07	34.10	36.20	38.36	40.59	42.87	45.22	47.62	50.09	52.62	5
6	33.61	35.68	37.81	40.00	42.25	44.57	46.94	49.38	51.88	54.44	6
7	35.22	37.31	39.48	41.70	43.98	46.33	48.73	51.20	53.73	56.33	7
8	36.88	39.01	41.20	43.46	45.77	48.15	50.59	53.09	55.65	58.27	8
9	38.61	40.77	42.99	45.28	47.62	50.03	52.50	55.03	57.62	60.28	9
10	40.40	42.59	44.85	47.16	49.54	51.98	54.48	57.04	59.66	62.35	10
11	42.25	44.48	46.76	49.10	51.51	53.98	56.51	59.10	61.76	64.48	11
12	44.17	46.42	48.73	51.11	53.55	56.05	58.61	61.23	63.92	66.67	12
13	46.14	48.43	50.77	53.18	55.65	58.18	60.77	63.43	66.14	68.92	13
14	48.18	50.49	52.87	55.31	57.81	60.37	62.99	65.68	68.43	71.23	14
15	50.28	52.62	55.03	57.50	60.03	62.62	65.28	67.99	70.77	73.61	15
16	52.44	54.81	57.25	59.75	62.31	64.94	67.62	70.37	73.18	76.05	16
17	54.66	57.07	59.54	62.07	64.66	67.31	70.03	72.81	75.65	78.55	17
18	56.94	59.38	61.88	64.44	67.07	69.75	72.50	75·31	78.18	81.11	18
19	59.29	61.76	64.29	66.88	69.54	72.25	75.03	77.87	80.77	83.73	19
20	61.70	64.20	66.76	69.38	72.07	74.81	77.62	80.49	83.43	86.42	20
21	64.16	66.70	69.29	71.94	74.66	77.44	80.28	83.18	86.14	89.17	21
22	66.70	69.26	71.88	74.57	77.31	80.12	82.99	85.93	88.92	91.98	22
23	69.29	71.88	74.54	77.25	80.03	82.87	85.77	88.73	91.76	94.85	23
24	71.94	74.57	77.25	80.00	82.81	85.68	88.61	91.60	94.66	97.78	24
25	74.66	77.31	80.03	82.81	85.65	88.55	91.51	94.54	97.62	100.77	25
26	77.44	80.12	82.87	85.68	88.55	91.48	94.48	97.53	100.65	103.83	26
27	80.28	82.99	85.77	88.61	91.51	94.48	97.50	100.59	103.73	106.94	27
28	83.18	85.93	88.73	91.60	94.54	97.53	100.59	103.70	106.88	110.12	28
29	86.14	88.92	91.76	94.66	97.62	100.65	103.73	106.88	110.09	113.36	29
30	89.17	91.98	94.85	97.78	100.77	103.83	106.94	110.12	113.36	116.67	30
31	92.25	95.09	97.99	100.96	103.98	107.07	110.22	113.43	116.70	120.03	31
32	95.40	98.27	101.20	104.20	107.25	110.37	113.55	116.79	120.09	123.46	32
33	98.61	101.51	104.48	107.50	110.59	113.73	116.94	120.22	123.55	126.94	33
34	101.88	104.81	107.81	110.86	113.98	117.16	120.40	123.70	127.07	130.49	34
35	105.22	108.18	111.20	114.29	117.44	120.65	123.92	127.25	130.65	134.10	35
36	108.61	111.60	114.66	117.78	120.96	124.20	127.50	130.86	134.29	137.78	36
37	112.07	115.09	118.18	121.33	124.54	127.81	131.14	134.54	137.99	141.51	37
38	115.59	118.64	121.76	124.94	128.18	131.48	134.85	138.27	141.76	145.31	38
39	119.17	122.25	125.40	128.61	131.88	135.22	138.61	142.07	145.59	149.17	39
40	122.81	125.93	129.10	132.35	135.65	139.01	142.44	145.93	149.48	153.09	40
41	126.51	129.66	132.87	136.14	139.48	142.87	146.33	149.85	153.43	157.07	41
42	130.28	133.46	136.70	140.00	143.36	146.79	150.28	153.83	157.44	161.11	42
43	134.10	137.31	140.59	143.92	147.31	150.77	154.29	157.87	161.51	165.22	43
44	137.99	141.23	144.54	147.90	151.33	154.81	158.36	161.98	165.65	169.39	44
45	141.94	145.22	148.55	151.94	155.40	158.92	162.50	166.14	169.85	173.61	45
46	145.96	149.26	152.62	156.05	159.54	163.09	166.70	170.37	174.10	177.90	46
47	150.03	153.36	156.76	160.22	163.73	167.31	170.96	174.66	178.43	182.25	47
48	154.17	157.53	160.96	164.44	167.99	171.60	175.28	179.01	182.81	186.67	48
49	158.36	161.76	165.22	168.73	172.31	175.96	179.66	183.43	187.25	191.14	49
50	162.62	166.05	169.54	173.09	176.70	180.37	184.10	187.90	190.76	195.68	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XVI.—BASE 30—SLOPES $2\frac{1}{2}$ to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	46.88	49.38	51.94	54.57	57.25	60.00	62.81	65.68	68.61	71.60	0
1	48.43	50.96	53.55	56.20	58.92	61.70	64.54	67.44	70.40	73.43	1
2	50.03	52.59	55.22	57.90	60.65	63.46	66.33	69.26	72.25	75.31	2
3	51.70	54.29	56.94	59.66	62.44	65.28	68.18	71.14	74.17	77.25	3
4	53.43	56.05	58.73	61.48	64.29	67.16	70.09	73.09	76.14	79.26	4
5	55.22	57.87	60.59	63.36	66.20	69.10	72.07	75.09	78.18	81.33	5
6	57.07	59.75	62.50	65.31	68.18	71.11	74.10	77.16	80.28	83.46	6
7	58.98	61.70	64.48	67.31	70.22	73.18	76.20	79.29	82.44	85.65	7
8	60.96	63.70	66.51	69.38	72.31	75.31	78.36	81.48	84.66	87.90	8
9	62.99	65.77	68.61	71.51	74.48	77.50	80.59	83.73	86.94	90.22	9
10	65.09	67.90	70.77	73.70	76.70	79.75	82.87	86.05	89.29	92.59	10
11	67.25	70.09	72.99	75.96	78.98	82.07	85.22	88.43	91.70	95.03	11
12	69.48	72.35	75.28	78.27	81.33	84.44	87.62	90.86	94.17	97.53	12
13	71.76	74.66	77.62	80.65	83.73	86.88	90.09	93.36	96.70	100.09	13
14	74.10	77.04	80.03	83.09	86.20	89.38	92.62	95.93	99.29	102.72	14
15	76.51	79.48	82.50	85.59	88.73	91.94	95.22	98.55	101.94	105.40	15
16	78.98	81.98	85.03	88.15	91.33	94.57	97.87	101.23	104.66	108.15	16
17	81.51	84.54	87.62	90.77	93.98	97.25	100.59	103.98	107.44	110.96	17
18	84.10	87.16	90.28	93.46	96.70	100.00	103.36	106.79	110.28	113.83	18
19	86.76	89.85	92.99	96.20	99.48	102.81	106.20	109.66	113.18	116.76	19
20	89.48	92.59	95.77	99.01	102.31	105.68	109.10	112.59	116.14	119.75	20
21	92.25	95.40	98.61	101.88	105.22	108.61	112.07	115.59	119.17	122.81	21
22	95.09	98.27	101.51	104.81	108.18	111.60	115.09	118.64	122.25	125.93	22
23	97.99	101.20	104.48	107.81	111.20	114.66	118.18	121.76	125.40	129.10	23
24	100.96	104.20	107.50	110.86	114.29	117.78	121.33	124.94	128.61	132.35	24
25	103.98	107.25	110.59	113.98	117.44	120.96	124.54	128.18	131.88	135.65	25
26	107.07	110.37	113.73	117.16	120.65	124.20	127.81	131.48	135.22	139.01	26
27	110.22	113.55	116.94	120.40	123.92	127.50	131.14	134.85	138.61	142.44	27
28	113.43	116.79	120.22	123.70	127.25	130.86	134.54	138.27	142.07	145.93	28
29	116.70	120.09	123.55	127.07	130.65	134.29	137.99	141.76	145.59	149.48	29
30	120.03	123.46	126.94	130.49	134.10	137.78	141.51	145.31	149.17	153.09	30
31	123.43	126.88	130.40	133.98	137.62	141.33	145.09	148.92	152.81	156.76	31
32	126.88	130.37	133.92	137.53	141.20	144.94	148.73	152.59	156.51	160.49	32
33	130.40	133.92	137.50	141.14	144.85	148.61	152.44	156.33	160.28	164.29	33
34	133.98	137.53	141.14	144.81	148.55	152.35	156.20	160.12	164.10	168.15	34
35	137.62	141.20	144.85	148.55	152.31	156.14	160.03	163.98	167.99	172.07	35
36	141.33	144.94	148.61	152.35	156.14	160.00	163.92	167.90	171.94	176.05	36
37	145.09	148.73	152.44	156.20	160.03	163.92	167.87	171.88	175.96	180.09	37
38	148.92	152.59	156.33	160.12	163.98	167.90	171.88	175.93	180.03	184.20	38
39	152.81	156.51	160.28	164.10	167.99	171.94	175.96	180.03	184.17	188.36	39
40	156.76	160.49	164.29	168.15	172.07	176.05	180.09	184.20	188.36	192.59	40
41	160.77	164.54	168.36	172.25	176.20	180.22	184.29	188.43	192.62	196.88	41
42	164.85	168.64	172.50	176.42	180.40	184.44	188.55	192.72	196.94	201.23	42
43	168.98	172.81	176.70	180.65	184.66	188.73	192.87	197.07	201.33	205.65	43
44	173.18	177.04	180.96	184.94	188.98	193.08	197.25	201.48	205.77	210.12	44
45	177.44	181.33	185.28	189.29	193.36	197.50	201.70	205.96	210.28	214.66	45
46	181.76	185.68	189.66	193.70	197.81	201.98	206.20	210.49	214.85	219.26	46
47	186.14	190.09	194.10	198.18	202.31	206.51	210.77	215.09	219.48	223.92	47
48	190.59	194.57	198.61	202.72	206.88	211.11	215.40	219.75	224.17	228.64	48
49	195.09	199.10	203.18	207.31	211.51	215.77	220.09	224.48	228.92	233.43	49
50	199.66	203.70	207.81	211.98	216.20	220.49	224.85	229.26	233.73	238.27	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XVI.—BASE 30—SLOPES 2½ to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	74.66	77.78	80.96	84.20	87.50	90.86	94.29	97.78	101.33	104.94	0
1	76.51	79.66	82.87	86.14	89.48	92.87	96.33	99.85	103.43	107.07	1
2	78.43	81.60	84.85	88.15	91.51	94.94	98.43	101.98	105.59	109.26	2
3	80.40	83.61	86.88	90.22	93.61	97.07	100.59	104.17	107.81	111.51	3
4	82.44	85.68	88.98	92.35	95.77	99.26	102.81	106.42	110.09	113.83	4
5	84.54	87.81	91.14	94.54	97.99	101.51	105.09	108.73	112.44	116.20	5
6	86.70	90.00	93.36	96.79	100.28	103.83	107.44	111.11	114.85	118.64	6
7	88.92	92.25	95.65	99.10	102.62	106.20	109.85	113.55	117.31	121.14	7
8	91.20	94.57	97.99	101.48	105.03	108.64	112.31	116.05	119.85	123.70	8
9	93.55	96.94	100.40	103.92	107.50	111.14	114.85	118.61	122.44	126.33	9
10	95.96	99.38	102.87	106.42	110.03	113.70	117.44	121.23	125.09	129.01	10
11	98.43	101.88	105.40	108.98	112.62	116.33	120.09	123.92	127.81	131.76	11
12	100.96	104.44	107.99	111.60	115.28	119.01	122.81	126.67	130.59	134.57	12
13	103.55	107.07	110.65	114.29	117.99	121.76	125.59	129.48	133.43	137.44	13
14	106.20	109.75	113.36	117.04	120.77	124.57	128.43	132.35	136.33	140.37	14
15	108.92	112.50	116.14	119.85	123.61	127.44	131.33	135.28	139.29	143.36	15
16	111.70	115.31	118.98	122.72	126.51	130.37	134.29	138.27	142.31	146.42	16
17	114.54	118.18	121.88	125.65	129.48	133.36	137.31	141.33	145.40	149.54	17
18	117.44	121.11	124.85	128.64	132.50	136.42	140.40	144.44	148.55	152.72	18
19	120.40	124.10	127.87	131.70	135.59	139.54	143.55	147.62	151.76	155.96	19
20	123.43	127.16	130.96	134.81	138.73	142.72	146.76	150.86	155.03	159.26	20
21	126.51	130.28	134.10	137.99	141.94	145.96	150.03	154.17	158.36	162.62	21
22	129.66	133.46	137.31	141.23	145.22	149.26	153.36	157.53	161.76	166.05	22
23	132.87	136.70	140.59	144.54	148.55	152.62	156.76	160.96	165.22	169.54	23
24	136.14	140.00	143.92	147.90	151.94	156.05	160.22	164.44	168.73	173.09	24
25	139.48	143.36	147.31	151.33	155.40	159.54	163.73	167.99	172.31	176.70	25
26	142.87	146.79	150.77	154.81	158.92	163.09	167.31	171.60	175.96	180.37	26
27	146.33	150.28	154.29	158.36	162.50	166.70	170.96	175.28	179.66	184.10	27
28	149.85	153.83	157.87	161.98	166.14	170.37	174.66	179.01	183.43	187.90	28
29	153.43	157.44	161.51	165.65	169.85	174.10	178.43	182.81	187.25	191.76	29
30	157.07	161.11	165.22	169.39	173.61	177.90	182.25	186.67	191.14	195.68	30
31	160.77	164.85	168.98	173.18	177.44	181.76	186.14	190.59	195.09	199.66	31
32	164.54	168.64	172.81	177.04	181.33	185.68	190.09	194.57	199.10	203.70	32
33	168.36	172.50	176.70	180.96	185.28	189.66	194.10	198.61	203.18	207.81	33
34	172.25	176.42	180.65	184.94	189.29	193.70	198.18	202.72	207.31	211.98	34
35	176.20	180.40	184.66	188.98	193.36	197.81	202.31	206.88	211.51	216.20	35
36	180.22	184.44	188.73	193.09	197.50	201.98	206.51	211.11	215.77	220.49	36
37	184.29	188.55	192.87	197.25	201.70	206.20	210.77	215.40	220.09	224.85	37
38	188.43	192.72	197.07	201.48	205.96	210.49	215.09	219.75	224.48	229.26	38
39	192.62	196.94	201.33	205.77	210.28	214.85	219.48	224.17	228.92	233.75	39
40	196.88	201.23	205.65	210.12	214.66	219.26	223.92	228.64	233.43	238.27	40
41	201.20	205.59	210.03	214.54	219.10	223.73	228.43	233.18	237.99	242.87	41
42	205.59	210.00	214.48	219.01	223.61	228.27	232.99	237.78	242.62	247.53	42
43	210.03	214.48	218.98	223.55	228.18	232.87	237.62	242.44	247.31	252.25	43
44	214.54	219.01	223.55	228.15	232.81	237.53	242.31	247.16	252.07	257.04	44
45	219.10	223.61	228.18	232.81	237.50	242.25	247.07	251.94	256.88	261.88	45
46	223.73	228.27	232.87	237.53	242.25	247.04	251.88	256.79	261.76	266.79	46
47	228.43	232.99	237.62	242.31	247.07	251.88	256.76	261.70	266.70	271.76	47
48	233.18	237.78	242.44	247.16	251.94	256.79	261.70	266.67	271.70	276.79	48
49	237.99	242.62	247.31	252.07	256.88	261.76	266.70	271.70	276.76	281.88	49
50	242.87	247.53	252.25	257.04	261.88	266.79	271.76	276.79	281.88	287.04	50
—	41	42	43	44	45	46	47	48	49	50	—

TABLE XVII.—BASE 20—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.41	0.89	1.44	2.07	2.78	3.55	4.41	5.33	6.33	7.41	0
1	0.85	1.37	1.96	2.63	3.37	4.19	5.07	6.04	7.07	8.19	1
2	1.37	1.92	2.55	3.26	4.04	4.89	5.81	6.81	7.89	9.04	2
3	1.96	2.55	3.22	3.96	4.78	5.67	6.63	7.67	8.78	9.96	3
4	2.63	3.26	3.96	4.74	5.59	6.52	7.52	8.59	9.74	10.96	4
5	3.37	4.04	4.78	5.59	6.48	7.44	8.48	9.59	10.78	12.04	5
6	4.19	4.89	5.67	6.52	7.44	8.44	9.52	10.67	11.89	13.19	6
7	5.07	5.81	6.63	7.52	8.48	9.52	10.63	11.81	13.07	14.41	7
8	6.04	6.81	7.67	8.59	9.59	10.67	11.81	13.04	14.33	15.70	8
9	7.07	7.89	8.78	9.74	10.78	11.89	13.07	14.33	15.67	17.07	9
10	8.19	9.04	9.96	10.96	12.04	13.19	14.41	15.70	17.07	18.52	10
11	9.37	10.26	11.22	12.26	13.37	14.55	15.81	17.15	18.55	20.04	11
12	10.63	11.55	12.55	13.63	14.78	16.00	17.30	18.67	20.11	21.63	12
13	11.96	12.92	13.96	15.07	16.26	17.52	18.85	20.26	21.74	23.30	13
14	13.37	14.37	15.44	16.59	17.81	19.11	20.48	21.92	23.44	25.04	14
15	14.85	15.89	17.00	18.18	19.44	20.78	22.18	23.67	25.22	26.85	15
16	16.41	17.48	18.63	19.85	21.15	22.52	23.96	25.48	27.07	28.74	16
17	18.04	19.15	20.33	21.59	22.92	24.33	25.81	27.37	29.00	30.70	17
18	19.74	20.89	22.11	23.41	24.78	26.22	27.74	29.33	31.00	32.74	18
19	21.52	22.70	23.96	25.30	26.70	28.18	29.74	31.37	33.07	34.85	19
20	23.37	24.59	25.89	27.26	28.70	30.22	31.81	33.48	35.22	37.04	20
21	25.30	26.55	27.89	29.30	30.78	32.33	33.96	35.67	37.44	39.30	21
22	27.30	28.59	29.96	31.41	32.92	34.52	36.18	37.92	39.74	41.63	22
23	29.37	30.70	32.11	33.59	35.15	36.78	38.48	40.26	42.11	44.04	23
24	31.52	32.89	34.33	35.85	37.44	39.11	40.85	42.67	44.55	46.52	24
25	33.74	35.15	36.63	38.18	39.81	41.52	43.30	45.15	47.07	49.07	25
26	36.04	37.48	39.00	40.59	42.26	44.00	45.81	47.70	49.67	51.70	26
27	38.41	39.89	41.44	43.07	44.78	46.55	48.41	50.33	52.33	54.41	27
28	40.85	42.37	43.96	45.63	47.37	49.19	51.07	53.04	55.07	57.19	28
29	43.37	44.92	46.55	48.26	50.04	51.89	53.81	55.81	57.89	60.04	29
30	45.96	47.55	49.22	50.96	52.78	54.67	56.63	58.67	60.78	62.96	30
31	48.63	50.26	51.96	53.74	55.59	57.52	59.52	61.59	63.74	65.96	31
32	51.37	53.04	54.78	56.59	58.48	60.44	62.48	64.59	66.78	69.04	32
33	54.19	55.89	57.67	59.52	61.44	63.44	65.52	67.67	69.89	72.19	33
34	57.07	58.81	60.63	62.52	64.48	66.52	68.63	70.81	73.07	75.41	34
35	60.04	61.81	63.67	65.59	67.59	69.67	71.81	74.04	76.33	78.70	35
36	63.07	64.89	66.78	68.74	70.78	72.89	75.07	77.33	79.67	82.07	36
37	66.19	68.04	69.96	71.96	74.04	76.19	78.41	80.70	83.07	85.52	37
38	69.37	71.26	73.22	75.26	77.37	79.55	81.81	84.15	86.55	89.04	38
39	72.63	74.55	76.55	78.63	80.78	83.00	85.30	87.67	90.11	92.63	39
40	75.96	77.92	79.96	82.07	84.26	86.52	88.85	91.26	93.74	96.30	40
41	79.37	81.37	83.44	85.59	87.81	90.11	92.48	94.92	97.44	100.04	41
42	82.85	84.89	87.00	89.18	91.44	93.78	96.18	98.67	101.22	103.85	42
43	86.41	88.48	90.63	92.85	95.15	97.52	99.96	102.48	105.07	107.74	43
44	90.04	92.15	94.33	96.59	98.92	101.33	103.81	106.37	109.00	111.70	44
45	93.74	95.89	98.11	100.41	102.78	105.22	107.74	110.33	113.00	115.74	45
46	97.52	99.70	101.96	104.30	106.70	109.18	111.74	114.37	117.07	119.85	46
47	101.37	103.59	105.89	108.26	110.70	113.22	115.81	118.48	121.22	124.04	47
48	105.30	107.55	109.89	112.30	114.78	117.33	119.96	122.67	125.44	128.30	48
49	109.30	111.59	113.96	116.41	118.92	121.52	124.18	126.92	129.74	132.63	49
50	113.37	115.70	118.11	120.59	123.15	125.78	128.48	131.26	134.11	137.04	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XVII.—BASE 20—SLOPES 3 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	8.55	9.78	11.07	12.44	13.89	15.41	17.00	18.67	20.41	22.22	0
1	9.37	10.63	11.96	13.37	14.85	16.41	18.04	19.74	21.52	23.37	1
2	10.26	11.55	12.92	14.37	15.89	17.48	19.15	20.89	22.70	24.59	2
3	11.22	12.55	13.96	15.44	17.00	18.63	20.33	22.11	23.96	25.89	3
4	12.26	13.63	15.07	16.59	18.18	19.85	21.59	23.41	25.30	27.26	4
5	13.37	14.78	16.26	17.81	19.44	21.15	22.92	24.78	26.70	28.70	5
6	14.55	16.00	17.52	19.11	20.78	22.52	24.33	26.22	28.18	30.22	6
7	15.81	17.30	18.85	20.48	22.18	23.96	25.81	27.74	29.74	31.81	7
8	17.15	18.67	20.26	21.92	23.67	25.48	27.37	29.33	31.37	33.48	8
9	18.55	20.11	21.74	23.44	25.22	27.07	29.00	31.00	33.07	35.22	9
10	20.04	21.63	23.30	25.04	26.85	28.74	30.70	32.74	34.85	37.04	10
11	21.59	23.22	24.92	26.70	28.55	30.48	32.48	34.55	36.70	38.92	11
12	23.22	24.89	26.63	28.44	30.33	32.30	34.33	36.44	38.63	40.89	12
13	24.92	26.63	28.41	30.26	32.18	34.18	36.26	38.41	40.63	42.92	13
14	26.70	28.44	30.26	32.15	34.11	36.15	38.26	40.44	42.70	45.04	14
15	28.55	30.33	32.18	34.11	36.11	38.18	40.33	42.55	44.85	47.22	15
16	30.48	32.30	34.18	36.15	38.18	40.30	42.48	44.74	47.07	49.48	16
17	32.48	34.33	36.26	38.26	40.33	42.48	44.70	47.00	49.37	51.81	17
18	34.55	36.44	38.41	40.44	42.55	44.74	47.00	49.33	51.74	54.22	18
19	36.70	38.63	40.63	42.70	44.85	47.07	49.37	51.74	54.18	56.70	19
20	38.92	40.89	42.92	45.04	47.22	49.48	51.81	54.22	56.70	59.26	20
21	41.22	43.22	45.30	47.44	49.67	51.96	54.33	56.78	59.30	61.89	21
22	43.59	45.63	47.74	49.92	52.18	54.52	56.92	59.41	61.96	64.59	22
23	46.04	48.11	50.26	52.48	54.78	57.15	59.59	62.11	64.70	67.37	23
24	48.55	50.67	52.85	55.11	57.44	59.85	62.33	64.89	67.52	70.22	24
25	51.15	53.30	55.52	57.81	60.18	62.63	65.15	67.74	70.41	73.15	25
26	53.81	56.00	58.26	60.59	63.00	65.48	68.04	70.67	73.37	76.15	26
27	56.55	58.78	61.07	63.44	65.89	68.41	71.00	73.67	76.41	79.22	27
28	59.37	61.63	63.96	66.37	68.85	71.41	74.04	76.74	79.52	82.37	28
29	62.26	64.55	66.92	69.37	71.89	74.48	77.15	79.89	82.70	85.59	29
30	65.22	67.55	69.96	72.44	75.00	77.63	80.33	83.11	85.96	88.89	30
31	68.26	70.63	73.07	75.59	78.18	80.85	83.59	86.41	89.30	92.26	31
32	71.37	73.78	76.26	78.81	81.44	84.15	86.92	89.78	92.70	95.70	32
33	74.55	77.00	79.52	82.11	84.78	87.52	90.33	93.22	96.18	99.22	33
34	77.81	80.30	82.85	85.48	88.18	90.96	93.81	96.74	99.74	102.81	34
35	81.15	83.67	86.26	88.92	91.67	94.48	97.37	100.33	103.37	106.48	35
36	84.55	87.11	89.74	92.44	95.22	98.07	101.00	104.00	107.07	110.22	36
37	88.04	90.63	93.30	96.04	98.85	101.74	104.70	107.74	110.85	114.04	37
38	91.59	94.22	96.92	99.70	102.55	105.48	108.48	111.55	114.70	117.92	38
39	95.22	97.89	100.63	103.44	106.33	109.30	112.33	115.44	118.63	121.89	39
40	98.92	101.63	104.41	107.26	110.18	113.18	116.26	119.41	122.63	125.92	40
41	102.70	105.44	108.26	111.15	114.11	117.15	120.26	123.44	126.70	130.04	41
42	106.55	109.33	112.18	115.11	118.11	121.18	124.33	127.55	130.85	134.22	42
43	110.48	113.30	116.18	119.15	122.18	125.30	128.48	131.74	135.07	138.48	43
44	114.48	117.33	120.26	123.26	126.33	129.48	132.70	136.00	139.37	142.81	44
45	118.55	121.44	124.41	127.44	130.55	133.74	137.00	140.33	143.74	147.22	45
46	122.70	125.63	128.63	131.70	134.85	138.07	141.37	144.74	148.18	151.70	46
47	126.92	129.89	132.92	136.04	139.22	142.48	145.81	149.22	152.70	156.26	47
48	131.22	134.22	137.30	140.44	143.67	146.96	150.33	153.78	157.30	160.89	48
49	135.59	138.63	141.74	144.92	148.18	151.52	154.92	158.41	161.96	165.59	49
50	140.01	143.11	146.26	149.48	152.78	156.15	159.59	163.11	166.70	170.37	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XVII.—BASE 20—SLOPES 3 *to* 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	24.11	26.07	28.11	30.22	32.41	34.67	37.00	39.41	41.89	44.44	0
1	25.30	27.30	29.37	31.52	33.74	36.04	38.41	40.85	43.37	45.96	1
2	26.55	28.59	30.70	32.89	35.15	37.48	39.89	42.37	44.92	47.55	2
3	27.89	29.96	32.11	34.33	36.63	39.00	41.44	43.96	46.55	49.22	3
4	29.30	31.41	33.59	35.85	38.18	40.59	43.07	45.63	48.26	50.96	4
5	30.78	32.92	35.15	37.44	39.81	42.26	44.78	47.37	50.04	52.78	5
6	32.33	34.52	36.78	39.11	41.52	44.00	46.55	49.19	51.89	54.67	6
7	33.96	36.18	38.48	40.85	43.30	45.81	48.41	51.07	53.81	56.63	7
8	35.67	37.92	40.26	42.67	45.15	47.70	50.33	53.04	55.81	58.67	8
9	37.44	39.74	42.11	44.55	47.07	49.67	52.33	55.07	57.89	60.78	9
10	39.30	41.63	44.04	46.52	49.07	51.70	54.41	57.19	60.04	62.96	10
11	41.22	43.59	46.04	48.55	51.15	53.81	56.55	59.37	62.26	65.22	11
12	43.22	45.63	48.11	50.67	53.30	56.00	58.78	61.63	64.55	67.55	12
13	45.30	47.74	50.26	52.85	55.52	58.26	61.07	63.96	66.92	69.96	13
14	47.44	49.92	52.48	55.11	57.81	60.59	63.44	66.37	69.37	72.44	14
15	49.67	52.18	54.78	57.44	60.18	63.00	65.89	68.85	71.89	75.00	15
16	51.96	54.52	57.15	59.85	62.63	65.48	68.41	71.41	74.48	77.63	16
17	54.33	56.92	59.59	62.33	65.15	68.04	71.00	74.04	77.15	80.33	17
18	56.78	59.41	62.11	64.89	67.74	70.67	73.67	76.74	79.89	83.11	18
19	59.30	61.96	64.70	67.52	70.41	73.37	76.41	79.52	82.70	85.96	19
20	61.89	64.59	67.37	70.22	73.15	76.15	79.22	82.37	85.59	88.89	20
21	64.55	67.30	70.11	73.00	75.96	79.00	82.11	85.30	88.55	91.89	21
22	67.30	70.07	72.92	75.85	78.85	81.92	85.07	88.30	91.59	94.96	22
23	70.11	72.92	75.81	78.78	81.81	84.92	88.11	91.37	94.70	98.11	23
24	73.00	75.85	78.78	81.78	84.85	88.00	91.22	94.52	97.89	101.33	24
25	75.96	78.85	81.81	84.85	87.96	91.15	94.41	97.74	101.15	104.63	25
26	79.00	81.92	84.92	88.00	91.15	94.37	97.67	101.04	104.48	108.00	26
27	82.11	85.07	88.11	91.22	94.41	97.67	101.00	104.41	107.89	111.44	27
28	85.30	88.30	91.37	94.52	97.74	101.04	104.41	107.85	111.37	114.96	28
29	88.55	91.59	94.70	97.89	101.15	104.48	107.89	111.37	114.92	118.55	29
30	91.89	94.96	98.11	101.33	104.63	108.00	111.44	114.96	118.55	122.22	30
31	95.30	98.41	101.59	104.85	108.18	111.59	115.07	118.63	122.26	125.96	31
32	98.78	101.92	105.15	108.44	111.81	115.26	118.78	122.37	126.04	129.78	32
33	102.33	105.52	108.78	112.11	115.52	119.00	122.55	126.19	129.89	133.67	33
34	105.96	109.18	112.48	115.85	119.30	122.81	126.41	130.07	133.81	137.63	34
35	109.67	112.92	116.26	119.67	123.15	126.70	130.33	134.04	137.81	141.67	35
36	113.44	116.74	120.11	123.55	127.07	130.67	134.33	138.07	141.89	145.78	36
37	117.30	120.63	124.04	127.52	131.07	134.70	138.41	142.19	146.04	149.96	37
38	121.22	124.59	128.04	131.55	135.15	138.81	142.55	146.37	150.26	154.22	38
39	125.22	128.63	132.11	135.67	139.30	143.00	146.78	150.63	154.55	158.55	39
40	129.30	132.74	136.26	139.85	143.52	147.26	151.07	154.96	158.92	162.96	40
41	133.44	136.92	140.48	144.11	147.81	151.59	155.44	159.37	163.37	167.44	41
42	137.67	141.18	144.78	148.44	152.18	156.00	159.89	163.85	167.89	172.00	42
43	141.96	145.52	149.15	152.85	156.63	160.48	164.41	168.41	172.48	176.63	43
44	146.33	149.92	153.59	157.33	161.15	165.04	169.00	173.04	177.15	181.33	44
45	150.78	154.41	158.11	161.89	165.74	169.67	173.67	177.74	181.89	186.11	45
46	155.30	158.96	162.70	166.52	170.41	174.37	178.41	182.52	186.70	190.96	46
47	159.89	163.59	167.37	171.22	175.15	179.15	183.22	187.37	191.59	195.89	47
48	164.55	168.30	172.11	176.00	179.96	184.00	188.11	192.30	196.55	200.89	48
49	169.30	173.07	176.92	180.85	184.85	188.92	193.07	197.30	201.59	205.96	49
50	174.11	177.92	181.81	185.78	189.81	193.92	198.11	202.37	206.70	211.11	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XVII.—BASE 20—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	47.07	49.78	52.55	55.41	58.33	61.33	64.41	67.55	70.78	74.07	0
1	48.63	51.37	54.19	57.07	60.04	63.07	66.19	69.37	72.63	75.96	1
2	50.26	53.04	55.89	58.81	61.81	64.89	68.04	71.26	74.55	77.92	2
3	51.96	54.78	57.67	60.63	63.67	66.78	69.96	73.22	76.55	79.96	3
4	53.74	56.59	59.52	62.52	65.59	68.74	71.96	75.26	78.63	82.07	4
5	55.59	58.48	61.44	64.48	67.59	70.78	74.04	77.37	80.78	84.26	5
6	57.52	60.44	63.44	66.52	69.67	72.89	76.19	79.55	83.00	86.52	6
7	59.52	62.48	65.52	68.63	71.81	75.07	78.41	81.81	85.30	88.85	7
8	61.59	64.59	67.67	70.81	74.04	77.33	80.70	84.15	87.67	91.26	8
9	63.74	66.78	69.89	73.07	76.33	79.67	83.07	86.55	90.11	93.74	9
10	65.96	69.04	72.19	75.41	78.70	82.07	85.52	89.04	92.63	96.30	10
11	68.26	71.37	74.55	77.81	81.15	84.55	88.04	91.59	95.22	98.92	11
12	70.63	73.78	77.00	80.30	83.67	87.11	90.63	94.22	97.89	101.63	12
13	73.07	76.26	79.52	82.85	86.26	89.74	93.30	96.92	100.63	104.41	13
14	75.59	78.81	82.11	85.48	88.92	92.44	96.04	99.70	103.44	107.26	14
15	78.18	81.44	84.78	88.18	91.67	95.22	98.85	102.55	106.33	110.18	15
16	80.85	84.15	87.52	90.96	94.48	98.07	101.74	105.48	109.30	113.18	16
17	83.59	86.92	90.33	93.81	97.37	101.00	104.70	108.48	112.33	116.26	17
18	86.41	89.78	93.22	96.74	100.33	104 00	107.74	111.55	115.44	119.41	18
19	89.30	92.70	96.18	99.74	103.37	107.07	110.85	114.70	118.63	122.63	19
20	92.26	95.70	99.22	102.81	106.48	110.22	114.04	117.92	121.89	125.92	20
21	95.30	98.78	102.33	105.96	109.67	113.44	117.30	121.22	125.22	129.30	21
22	98.41	101.92	105.52	109.18	112.92	116.74	120.63	124.59	128.63	132.74	22
23	101.59	105.15	108.78	112.48	116.26	120.11	124.04	128.04	132.11	136.26	23
24	104.85	108.44	112.11	115.85	119.67	123.55	127.52	131.55	135.67	139.85	24
25	108.18	111.81	115.52	119.30	123.15	127.07	131.07	135.15	139.30	143.52	25
26	111.59	115.26	119.00	122.81	126.70	130.67	134.70	138.81	143.00	147.26	26
27	115.07	118.78	122.55	126.41	130.33	134.33	138.41	142.55	146.78	151.07	27
28	118.63	122.37	126.19	130.07	134.04	138.07	142.19	146.37	150.63	154.96	28
29	122.26	126.04	129.89	133.81	137.81	141.89	146.04	150.26	154.55	158.92	29
30	125.96	129.78	133.67	137.63	141.67	145.78	149.96	154.22	158.55	162.96	30
31	129.74	133.59	137.52	141.52	145.59	149.74	153.96	158.26	162.63	167.07	31
32	133.59	137.48	141.44	145.48	149.59	153.78	158.04	162.37	166.78	171.26	32
33	137.52	141.44	145.44	149.52	153.67	157.89	162.19	166.55	171.00	175.52	33
34	141.52	145.48	149.52	153.63	157.81	162.07	166.41	170.81	175.30	179.85	34
35	145.59	149.59	153.67	157.81	162.04	166.33	170.70	175.15	179.67	184.26	35
36	149.74	153.78	157.89	162.07	166.33	170.67	175.07	179.55	184.11	188.74	36
37	153.96	158.04	162.19	166.41	170.70	175.07	179.52	184.04	188.63	193.30	37
38	158.26	162.37	166.55	170.81	175.15	179.55	184.04	188.59	193.22	197.92	38
39	162.63	166.78	171.00	175.30	179.67	184.11	188.63	193.22	197.89	202.63	39
40	167.07	171.26	175.52	179.85	184.26	188.74	193.30	197.92	202.63	207.41	40
41	171.59	175.81	180.11	184.48	188.92	193.44	198.04	202.70	207.44	212.26	41
42	176.18	180.44	184.78	189.18	193.67	198.22	202.85	207.55	212.33	217.18	42
43	180.85	185.15	189.52	193.96	198.48	203.07	207.74	212.48	217.30	222.18	43
44	185.59	189.92	194.33	198.81	203.37	208.00	212.70	217.48	222.33	227.26	44
45	190.41	194.78	199.22	203.74	208.33	213.00	217.74	222.55	227.44	232.41	45
46	195.30	199.70	204.18	208.74	213.37	218.07	222.85	227.70	232.63	237.63	46
47	200.26	204.70	209.22	213.81	218.48	223.22	228.04	232.92	237.89	242.92	47
48	205.30	209.78	214.33	218.96	223.67	228.44	233.30	238.22	243.22	248.30	48
49	210.41	214.92	219.52	224.18	228.92	233.74	238.63	243.59	248.63	253.74	49
50	215.59	220.15	224.78	229.48	234.26	239.11	244.04	249.04	254.11	259.26	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XVII.—BASE 20—SLOPES 3 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	77.44	80.89	84.41	88.00	91.67	95.41	99.22	103.11	107.07	111.11	0
1	79.37	82.85	86.41	90.04	93.74	97.52	101.37	105.30	109.30	113.37	1
2	81.37	84.89	88.48	92.15	95.89	99.70	103.59	107.55	111.59	115.70	2
3	83.44	87.00	90.63	94.33	98.11	101.96	105.89	109.89	113.96	118.11	3
4	85.59	89.18	92.85	96.59	100.41	104.30	108.26	112.30	116.41	120.59	4
5	87.81	91.44	95.15	98.92	102.78	106.70	110.70	114.78	118.92	123.15	5
6	90.11	93.78	97.52	101.33	105.22	109.18	113.22	117.33	121.52	125.78	6
7	92.48	96.18	99.96	103.81	107.74	111.74	115.81	119.96	124.18	128.48	7
8	94.92	98.67	102.48	106.37	110.33	114.37	118.48	122.67	126.92	131.26	8
9	97.44	101.22	105.07	109.00	113.00	117.07	121.22	125.44	129.74	134.11	9
10	100.04	103.85	107.74	111.70	115.74	119.85	124.04	128.30	132.63	137.04	10
11	102.70	106.55	110.48	114.48	118.55	122.70	126.92	131.22	135.59	140.04	11
12	105.44	109.33	113.30	117.33	121.44	125.63	129.89	134.22	138.63	143.11	12
13	108.26	112.18	116.18	120.26	124.41	128.63	132.92	137.30	141.74	146.26	13
14	111.15	115.11	119.15	123.26	127.44	131.70	136.04	140.44	144.92	149.48	14
15	114.11	118.11	122.18	126.33	130.55	134.85	139.22	143.67	148.18	152.78	15
16	117.15	121.18	125.30	129.48	133.74	138.07	142.48	146.96	151.52	156.15	16
17	120.26	124.33	128.48	132.70	137.00	141.37	145.81	150.33	154.92	159.59	17
18	123.44	127.55	131.74	136.00	140.33	144.74	149.22	153.78	158.41	163.11	18
19	126.70	130.85	135.07	139.37	143.74	148.18	152.70	157.30	161.96	166.70	19
20	130.04	134.22	138.48	142.81	147.22	151.70	156.26	160.89	165.59	170.37	20
21	133.44	137.67	141.96	146.33	150.78	155.30	159.89	164.55	169.30	174.11	21
22	136.92	141.18	145.52	149.92	154.41	158.96	163.59	168.30	173.07	177.92	22
23	140.48	144.78	149.15	153.59	158.11	162.70	167.37	172.11	176.92	181.81	23
24	144.11	148.44	152.85	157.33	161.89	166.52	171.22	176.00	180.85	185.78	24
25	147.81	152.18	156.63	161.15	165.74	170.41	175.15	179.96	184.85	189.81	25
26	151.59	156.00	160.48	165.04	169.67	174.37	179.15	184.00	188.92	193.92	26
27	155.44	159.89	164.41	169.00	173.67	178.41	183.22	188.11	193.07	198.11	27
28	159.37	163.85	168.41	173.04	177.74	182.52	187.37	192.30	197.30	202.37	28
29	163.37	167.89	172.48	177.15	181.89	186.70	191.59	196.55	201.59	206.70	29
30	167.44	172.00	176.63	181.33	186.11	190.96	195.89	200.89	205.96	211.11	30
31	171.59	176.18	180.85	185.59	190.41	195.30	200.26	205.30	210.41	215.59	31
32	175.81	180.44	185.15	189.92	194.78	199.70	204.70	209.78	214.92	220.15	32
33	180.11	184.78	189.52	194.33	199.22	204.18	209.22	214.33	219.52	224.78	33
34	184.48	189.18	193.96	198.81	203.74	208.74	213.81	218.96	224.18	229.48	34
35	188.92	193.67	198.48	203.37	208.33	213.37	218.48	223.67	228.92	234.26	35
36	193.44	198.22	203.07	208.00	213.00	218.07	223.22	228.44	233.74	239.11	36
37	198.04	202.85	207.74	212.70	217.74	222.85	228.04	233.30	238.63	244.04	37
38	202.70	207.55	212.48	217.48	222.55	227.70	232.92	238.22	243.59	249.04	38
39	207.44	212.33	217.30	222.33	227.44	232.63	237.89	243.22	248.63	254.11	39
40	212.26	217.18	222.18	227.26	232.41	237.63	242.92	248.30	253.74	259.26	40
41	217.15	222.11	227.15	232.26	237.44	242.70	248.04	253.44	258.92	264.48	41
42	222.11	227.11	232.18	237.33	242.55	247.85	253.22	258.67	264.18	269.78	42
43	227.15	232.18	237.30	242.48	247.74	253.07	258.48	263.96	269.52	275.15	43
44	232.26	237.33	242.48	247.70	253.00	258.37	263.81	269.33	274.92	280.59	44
45	237.44	242.55	247.74	253.00	258.33	263.74	269.22	274.78	280.41	286.11	45
46	242.70	247.85	253.07	258.37	263.74	269.18	274.70	280.30	285.96	291.70	46
47	248.04	253.22	258.48	263.81	269.22	274.70	280.26	285.89	291.59	297.37	47
48	253.44	258.67	263.96	269.33	274.78	280.30	285.89	291.55	297.30	303.11	48
49	258.92	264.18	269.52	274.92	280.41	285.96	291.59	297.30	303.07	308.92	49
50	264.48	269.78	275.15	280.59	286.11	291.70	297.37	303.11	308.92	314.81	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XVIII.—BASE 25—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.50	1.07	1.72	2.44	3.24	4.11	5.06	6.07	7.17	8.33	0
1	1.04	1.65	2.33	3.09	3.93	4.83	5.81	6.87	8.00	9.20	1
2	1.65	2.30	3.02	3.81	4.69	5.63	6.65	7.74	8.91	10.15	2
3	2.33	3.02	3.78	4.61	5.52	6.50	7.56	8.69	9.89	11.17	3
4	3.09	3.81	4.61	5.48	6.43	7.44	8.54	9.70	10.94	12.26	4
5	3.93	4.69	5.52	6.43	7.41	8.46	9.59	10.80	12.07	13.43	5
6	4.83	5.63	6.50	7.44	8.46	9.56	10.72	11.96	13.28	14.67	6
7	5.81	6.65	7.56	8.54	9.59	10.72	11.93	13.20	14.56	15.98	7
8	6.87	7.74	8.69	9.70	10.80	11.96	13.20	14.52	15.91	17.37	8
9	8.00	8.91	9.89	10.94	12.07	13.28	14.56	15.91	17.33	18.83	9
10	9.20	10.15	11.17	12.26	13.43	14.67	15.98	17.37	18.83	20.37	10
11	10.48	11.46	12.52	13.65	14.85	16.13	17.48	18.91	20.41	21.98	11
12	11.83	12.85	13.94	15.11	16.35	17.67	19.06	20.52	22.06	23.67	12
13	13.26	14.31	15.44	16.65	17.93	19.28	20.70	22.20	23.78	25.43	13
14	14.76	15.85	17.02	18.26	19.57	20.96	22.43	23.96	25.57	27.26	14
15	16.33	17.46	18.67	19.94	21.30	22.72	24.22	25.80	27.44	29.17	15
16	17.98	19.15	20.39	21.70	23.09	24.56	26.09	27.70	29.39	31.15	16
17	19.70	20.91	22.19	23.54	24.96	26.46	28.04	29.69	31.41	33.20	17
18	21.50	22.74	24.06	25.44	26.91	28.44	30.06	31.74	33.50	35.33	18
19	23.37	24.65	26.00	27.43	28.93	30.50	32.15	33.87	35.67	37.54	19
20	25.31	26.63	28.02	29.48	31.02	32.63	34.31	36.07	37.91	39.81	20
21	27.33	28.69	30.11	31.61	33.19	34.83	36.56	38.35	40.22	42.17	21
22	29.43	30.81	32.28	33.81	35.43	37.11	38.87	40.70	42.61	44.59	22
23	31.59	33.02	34.52	36.09	37.74	39.46	41.26	43.13	45.07	47.09	23
24	33.83	35.30	36.83	38.44	40.13	41.89	43.72	45.63	47.61	49.67	24
25	36.15	37.65	39.22	40.87	42.59	44.39	46.26	48.20	50.22	52.31	25
26	38.54	40.07	41.69	43.37	45.13	46.96	48.87	50.85	52.91	55.04	26
27	41.00	42.57	44.22	45.94	47.74	49.61	51.56	53.57	55.67	57.83	27
28	43.54	45.15	46.83	48.59	50.43	52.33	54.31	56.37	58.50	60.70	28
29	46.15	47.80	49.52	51.31	53.19	55.13	57.15	59.24	61.41	63.65	29
30	48.83	50.52	52.28	54.11	56.02	58.00	60.06	62.19	64.39	66.67	30
31	51.59	53.31	55.11	56.98	58.93	60.94	63.04	65.20	67.44	69.76	31
32	54.43	56.19	58.02	59.93	61.91	63.96	66.09	68.30	70.57	72.93	32
33	57.33	59.13	61.00	62.94	64.96	67.06	69.22	71.46	73.78	76.17	33
34	60.31	62.15	64.06	66.04	68.09	70.22	72.43	74.70	77.06	79.48	34
35	63.37	65.24	67.19	69.20	71.30	73.46	75.70	78.02	80.41	82.87	35
36	66.50	68.41	70.39	72.44	74.57	76.78	79.06	81.41	83.83	86.33	36
37	69.70	71.65	73.67	75.76	77.93	80.17	82.48	84.87	87.33	89.87	37
38	72.98	74.96	77.02	79.15	81.35	83.63	85.98	88.41	90.91	93.48	38
39	76.33	78.35	80.44	82.61	84.85	87.17	89.56	92.02	94.56	97.17	39
40	79.76	81.81	83.94	86.15	88.43	90.78	93.20	95.70	98.28	100.93	40
41	83.26	85.35	87.52	89.76	92.07	94.46	96.93	99.46	102.07	104.76	41
42	86.83	88.96	91.17	93.44	95.80	98.22	100.72	103.30	105.94	108.67	42
43	90.48	92.65	94.89	97.20	99.59	102.06	104.59	107.20	109.89	112.65	43
44	94.20	96.41	98.69	101.04	103.46	105.96	108.54	111.19	113.91	116.70	44
45	98.00	100.24	102.56	104.94	107.41	109.94	112.56	115.24	118.00	120.83	45
46	101.87	104.15	106.50	108.93	111.43	114.00	116.65	119.37	122.17	125.04	46
47	105.81	108.13	110.52	112.98	115.52	118.13	120.81	123.57	126.41	129.31	47
48	109.83	112.19	114.61	117.11	119.69	122.33	125.06	127.85	130.72	133.67	48
49	113.93	116.31	118.78	121.31	123.93	126.61	129.37	132.20	135.11	138.09	49
50	118.09	120.52	123.02	125.59	128.24	130.96	133.76	136.63	139.57	142.59	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XVIII.—BASE 25—SLOPES 3 *to* 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.57	10.89	12.28	13.74	15.28	16.89	18.57	19.33	22.17	24.07	0
1	10.48	11.83	13.26	14.76	16.33	17.98	19.70	21.50	23.37	25.31	1
2	11.46	12.85	14.31	15.85	17.46	19.15	20.91	22.74	24.65	26.63	2
3	12.52	13.94	15.44	17.02	18.67	20.39	22.19	24.06	26.00	28.02	3
4	13.65	15.11	16.65	18.26	19.94	21.70	23.54	25.44	27.43	29.48	4
5	14.85	16.35	17.93	19.57	21.30	23.09	24.96	26.91	28.93	31.02	5
6	16.13	17.67	19.28	20.96	22.72	24.56	26.46	28.44	30.50	32.63	6
7	17.48	19.06	20.70	22.43	24.22	26.09	28.04	30.06	32.15	34.31	7
8	18.91	20.52	22.20	23.96	25.80	27.70	29.69	31.74	33.87	36.07	8
9	20.41	22.06	23.78	25.57	27.44	29.39	31.41	33.50	35.67	37.91	9
10	21.98	23.67	25.43	27.26	29.17	31.15	33.20	35.33	37.54	39.81	10
11	23.63	25.35	27.15	29.02	30.96	32.98	35.07	37.24	39.48	41.80	11
12	25.35	27.11	28.94	30.85	32.83	34.89	37.02	39.22	41.50	43.85	12
13	27.15	28.94	30.81	32.76	34.78	36.87	39.04	41.28	43.59	45.98	13
14	29.02	30.85	32.76	34.74	36.80	38.93	41.13	43.41	45.76	48.19	14
15	30.96	32.83	34.78	36.80	38.89	41.06	43.30	45.61	48.00	50.46	15
16	32.98	34.89	36.87	38.93	41.06	43.26	45.54	47.89	50.31	52.81	16
17	35.07	37.02	39.04	41.13	43.30	45.54	47.85	50.24	52.70	55.24	17
18	37.24	39.22	41.28	43.41	45.61	47.89	50.24	52.67	55.17	57.74	18
19	39.48	41.50	43.59	45.76	48.00	50.31	52.70	55.17	57.70	60.31	19
20	41.80	43.85	45.98	48.19	50.46	52.81	55.24	57.74	60.31	62.96	20
21	44.19	46.28	48.44	50.69	53.00	55.39	57.85	60.39	63.00	65.69	21
22	46.65	48.78	50.98	53.26	55.61	58.04	60.54	63.11	65.76	68.48	22
23	49.19	51.35	53.59	55.91	58.30	60.76	63.30	65.91	68.59	71.35	23
24	51.80	54.00	56.28	58.63	61.06	63.56	66.13	68.78	71.50	74.30	24
25	54.48	56.72	59.04	61.43	63.89	66.43	69.04	71.72	74.48	77.31	25
26	57.24	59.52	61.87	64.30	66.80	69.37	72.02	74.74	77.54	80.41	26
27	60.07	62.39	64.78	67.24	69.78	72.39	75.07	77.83	80.67	83.57	27
28	62.98	65.33	67.76	70.26	72.83	75.48	78.20	81.00	83.87	86.81	28
29	65.96	68.35	70.81	73.35	75.96	78.65	81.41	84.24	87.15	90.13	29
30	69.02	71.44	73.94	76.52	79.17	81.89	84.69	87.56	90.50	93.52	30
31	72.15	74.61	77.15	79.76	82.44	85.20	88.04	90.94	93.93	96.98	31
32	75.35	77.85	80.43	83.07	85.80	88.59	91.46	94.41	97.43	100.52	32
33	78.63	81.17	83.78	86.46	89.22	92.06	94.96	97.94	101.00	104.13	33
34	81.98	84.56	87.20	89.93	92.72	95.59	98.54	101.56	104.65	107.81	34
35	85.41	88.02	90.70	93.46	96.30	99.20	102.19	105.24	108.37	111.57	35
36	88.91	91.56	94.28	97.07	99.94	102.89	105.91	109.00	112.17	115.41	36
37	92.48	95.17	97.93	100.76	103.67	106.65	109.70	112.83	116.04	119.31	37
38	96.13	98.85	101.65	104.52	107.46	110.48	113.57	116.74	119.98	123.30	38
39	99.85	102.61	105.44	108.35	111.33	114.39	117.52	120.72	124.00	127.35	39
40	103.65	106.44	109.31	112.26	115.28	118.37	121.54	124.78	128.09	131.48	40
41	107.52	110.35	113.26	116.24	119.30	122.43	125.63	128.91	132.26	135.69	41
42	111.46	114.33	117.28	120.30	123.39	126.56	129.80	133.11	136.50	139.96	42
43	115.48	118.39	121.37	124.43	127.56	130.76	134.04	137.39	140.81	144.31	43
44	119.57	122.52	125.54	128.63	131.80	135.04	138.35	141.74	145.20	148.74	44
45	123.74	126.72	129.78	132.91	136.11	139.39	142.74	146.17	149.67	153.24	45
46	127.98	131.00	134.09	137.26	140.50	143.81	147.20	150.67	154.20	157.81	46
47	132.30	135.35	138.48	141.69	144.96	148.31	151.74	155.24	158.81	162.46	47
48	136.69	139.78	142.94	146.19	149.50	152.89	156.35	159.89	163.50	167.19	48
49	141.15	144.28	147.48	150.76	154.11	157.54	161.04	164.61	168.26	171.98	49
50	145.96	148.85	152.09	155.41	158.80	162.26	165.80	169.41	173.09	176.85	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XVIII.—BASE 25—SLOPES 3 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	26.06	28.11	30.24	32.44	34.72	37.07	39.50	42.00	44.57	47.22	0
1	27.33	29.43	31.59	33.83	36.15	38.54	41.00	43.54	46.15	48.83	1
2	28.69	30.81	33.02	35.30	37.65	40.07	42.57	45.15	47.80	50.52	2
3	30.11	32.28	34.52	36.85	39.22	41.69	44.22	46.85	49.52	52.28	3
4	31.61	33.81	36.09	38.44	40.87	43.37	45.94	48.59	51.31	54.11	4
5	33.19	35.43	37.74	40.13	42.59	45.13	47.74	50.43	53.19	56.02	5
6	34.83	37.11	39.46	41.89	44.39	46.96	49.61	52.33	55.13	58.00	6
7	36.56	38.87	41.26	43.72	46.26	48.87	51.56	54.31	57.15	60.06	7
8	38.35	40.70	43.13	45.63	48.20	50.85	53.57	56.37	59.24	62.19	8
9	40.22	42.61	45.07	47.61	50.22	52.91	55.67	58.50	61.41	64.39	9
10	42.17	44.59	47.09	49.67	52.31	55.04	57.83	60.70	63.65	66.67	10
11	44.19	46.65	49.19	51.80	54.48	57.24	60.07	62.98	65.96	69.02	11
12	46.28	48.78	51.35	54.00	56.72	59.52	62.39	65.33	68.35	71.44	12
13	48.44	50.98	53.59	56.28	59.04	61.87	64.78	67.76	70.81	73.94	13
14	50.69	53.26	55.91	58.63	61.43	64.30	67.24	70.26	73.35	76.52	14
15	53.00	55.61	58.30	61.06	63.89	66.80	69.78	72.83	75.96	79.17	15
16	55.39	58.04	60.76	63.56	66.43	69.37	72.39	75.48	78.65	81.89	16
17	57.85	60.54	63.30	66.13	69.04	72.02	75.07	78.20	81.41	84.69	17
18	60.39	63.11	65.91	68.78	71.72	74.74	77.83	81.00	84.24	87.56	18
19	63.00	65.76	68.59	71.50	74.48	77.54	80.67	83.87	87.15	90.50	19
20	65.69	68.48	71.35	74.30	77.31	80.41	83.57	86.81	90.13	93.52	20
21	68.44	71.28	74.19	77.17	80.22	83.35	86.56	89.83	93.19	96.61	21
22	71.28	74.15	77.09	80.11	83.20	86.37	89.61	92.93	96.31	99.78	22
23	74.19	77.09	80.07	83.13	86.26	89.46	92.74	96.09	99.52	103.02	23
24	77.17	80.11	83.13	86.22	89.39	92.63	95.94	99.33	102.80	106.33	24
25	80.22	83.20	86.26	89.39	92.59	95.87	99.22	102.65	106.15	109.72	25
26	83.35	86.37	89.46	92.63	95.87	99.19	102.57	106.04	109.57	113.19	26
27	86.56	89.61	92.74	95.94	99.22	102.57	106.00	109.50	113.07	116.72	27
28	89.83	92.93	96.09	99.33	102.65	106.04	109.50	113.04	116.65	120.33	28
29	93.19	96.31	99.52	102.80	106.15	109.57	113.07	116.65	120.30	124.02	29
30	96.61	99.78	103.02	106.33	109.72	113.19	116.72	120.33	124.02	127.78	30
31	100.11	103.31	106.59	109.94	113.37	116.87	120.44	124.09	127.81	131.61	31
32	103.69	106.93	110.24	113.63	117.09	120.63	124.24	127.93	131.69	135.52	32
33	107.33	110.61	113.96	117.39	120.89	124.46	128.11	131.83	135.63	139.50	33
34	111.06	114.37	117.76	121.22	124.76	128.37	132.06	135.81	139.65	143.56	34
35	114.85	118.20	121.63	125.13	128.70	132.35	136.07	139.87	143.74	147.69	35
36	118.72	122.11	125.57	129.11	132.72	136.41	140.17	144.00	147.91	151.89	36
37	122.67	126.09	129.59	133.17	136.81	140.54	144.33	148.20	152.15	156.17	37
38	126.69	130.15	133.69	137.30	140.98	144.74	148.57	152.48	156.46	160.52	38
39	130.78	134.28	137.85	141.50	145.22	149.02	152.89	156.83	160.85	164.94	39
40	134.94	138.48	142.09	145.78	149.54	153.37	157.28	161.26	165.31	169.44	40
41	139.19	142.76	146.41	150.13	153.93	157.80	161.74	165.76	169.85	174.02	41
42	143.50	147.11	150.80	154.56	158.39	162.30	166.28	170.33	174.46	178.67	42
43	147.89	151.54	155.26	159.06	162.93	166.87	170.89	174.98	179.15	183.39	43
44	152.35	156.04	159.80	163.63	167.54	171.52	175.57	179.70	183.91	188.19	44
45	156.89	160.61	164.41	168.28	172.22	176.24	180.33	184.50	188.74	193.06	45
46	161.50	165.26	169.09	173.00	176.98	181.04	185.17	189.37	193.65	198.00	46
47	166.19	169.98	173.85	177.80	181.81	185.91	190.07	194.31	198.63	203.02	47
48	170.94	174.78	178.69	182.67	186.72	190.85	195.06	199.33	203.69	208.11	48
49	175.78	179.65	183.59	187.61	191.70	195.87	200.11	204.45	208.81	213.28	49
50	180.69	184.59	188.57	192.63	196.76	200.96	205.24	209.59	214.02	218.52	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XVIII.—BASE 25—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	49.92	52.74	55.61	58.56	61.57	64.67	67.83	71.07	74.38	77.78	0
1	51.59	54.43	57.33	60.31	63.37	66.50	69.70	72.98	76.33	79.76	1
2	53.31	56.19	59.13	62.15	65.24	68.41	71.65	74.96	78.35	81.81	2
3	55.11	58.02	61.00	64.06	67.19	70.39	73.67	77.02	80.44	83.94	3
4	56.98	59.93	62.94	66.04	69.20	72.44	75.76	79.15	82.61	86.15	4
5	58.93	61.91	64.96	68.09	71.30	74.57	77.93	81.35	84.85	88.43	5
6	60.94	63.96	67.06	70.22	73.46	76.78	80.17	83.63	87.17	90.78	6
7	63.04	66.09	69.22	72.43	75.70	79.06	82.48	85.98	89.56	93.20	7
8	65.20	68.30	71.46	74.70	78.02	81.41	84.87	88.41	92.02	95.70	8
9	67.44	70.57	73.78	77.06	80.41	83.83	87.33	90.91	94.56	98.28	9
10	69.76	72.93	76.17	79.48	82.87	86.33	89.87	93.48	97.17	100.93	10
11	72.15	75.35	78.63	81.98	85.41	88.91	92.48	96.13	99.85	103.65	11
12	74.61	77.85	81.17	84.56	88.02	91.56	95.17	98.85	102.61	106.44	12
13	77.15	80.43	83.78	87.20	90.70	94.28	97.93	101.65	105.44	109.31	13
14	79.76	83.07	86.46	89.93	93.46	97.07	100.76	104.52	108.35	112.26	14
15	82.44	85.80	89.22	92.72	96.30	99.94	103.67	107.46	111.33	115.28	15
16	85.20	88.59	92.06	95.59	99.20	102.89	106.65	110.48	114.39	118.37	16
17	88.04	91.46	94.96	98.54	102.19	105.91	109.70	113.57	117.52	121.54	17
18	90.94	94.41	97.94	101.56	105.24	109.00	112.83	116.74	120.72	124.78	18
19	93.93	97.43	101.00	104.65	108.37	112.17	116.04	119.98	124.00	128.09	19
20	96.98	100.52	104.13	107.81	111.57	115.41	119.31	123.30	127.35	131.48	20
21	100.11	103.69	107.33	111.06	114.85	118.72	122.67	126.69	130.78	134.94	21
22	103.31	106.93	110.61	114.37	118.20	122.11	126.09	130.15	134.28	138.48	22
23	106.59	110.24	113.96	117.76	121.63	125.57	129.59	133.69	137.85	142.09	23
24	109.94	113.63	117.39	121.22	125.13	129.11	133.17	137.30	141.50	145.78	24
25	113.37	117.09	120.89	124.76	128.70	132.72	136.81	140.98	145.22	149.54	25
26	116.87	120.63	124.46	128.37	132.35	136.41	140.54	144.74	149.02	153.37	26
27	120.44	124.24	128.11	132.06	136.07	140.17	144.35	148.57	152.89	157.28	27
28	124.09	127.93	131.83	135.81	139.87	144.00	148.20	152.48	156.83	161.26	28
29	127.81	131.69	135.63	139.65	143.74	147.91	152.15	156.46	160.85	165.31	29
30	131.61	135.52	139.50	143.56	147.69	151.89	156.17	160.52	164.94	169.44	30
31	135.48	139.43	143.44	147.54	151.70	155.94	160.26	164.65	169.11	173.65	31
32	139.43	143.41	147.46	151.59	155.80	160.07	164.43	168.85	173.35	177.93	32
33	143.44	147.46	151.56	155.72	159.96	164.28	168.67	173.13	177.67	182.28	33
34	147.54	151.59	155.72	159.93	164.20	168.56	172.98	177.48	182.06	186.70	34
35	151.70	155.80	159.96	164.20	168.52	172.91	177.37	181.91	186.52	191.20	35
36	155.94	160.07	164.28	168.56	172.91	177.33	181.83	186.41	191.06	195.78	36
37	160.26	164.43	168.67	172.98	177.37	181.83	186.37	190.98	195.67	200.43	37
38	164.65	168.85	173.13	177.48	181.91	186.41	190.98	195.63	200.35	205.15	38
39	169.11	173.35	177.67	182.06	186.52	191.06	195.67	200.35	205.11	209.94	39
40	173.65	177.93	182.28	186.70	191.20	195.78	200.43	205.15	209.94	214.81	40
41	178.26	182.57	186.96	191.43	195.96	200.57	205.26	210.02	214.85	219.76	41
42	182.94	187.30	191.72	196.22	200.80	205.44	210.17	214.96	219.83	224.78	42
43	187.70	192.09	196.56	201.09	205.70	210.39	215.15	219.98	224.89	229.87	43
44	192.54	196.96	201.46	206.04	210.69	215.41	220.20	225.07	230.02	235.04	44
45	197.44	201.91	206.44	211.06	215.74	220.50	225.33	230.24	235.22	240.28	45
46	202.43	206.93	211.50	216.15	220.87	225.67	230.54	235.48	240.50	245.59	46
47	207.48	212.02	216.63	221.31	226.07	230.91	235.81	240.80	245.85	250.98	47
48	212.61	217.19	221.83	226.56	231.35	236.22	241.17	246.19	251.28	256.44	48
49	217.81	222.43	227.11	231.87	236.70	241.61	246.59	251.65	256.78	261.98	49
50	223.09	227.74	232.46	237.26	242.13	247.07	252.09	257.19	262.35	267.59	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XVIII.—BASE 25—SLOPES 3 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	81.24	84.78	88.39	92.07	95.83	99.67	103.57	107.56	111.61	115.74	0
1	83.26	86.83	90.48	94.20	98.00	101.87	105.81	109.83	113.93	118.09	1
2	85.35	88.96	92.65	96.41	100.24	104.15	108.13	112.19	116.31	120.52	2
3	87.52	91.17	94.89	98.69	102.56	106.50	110.52	114.61	118.78	123.02	3
4	89.76	93.44	97.20	101.04	104.94	108.93	112.98	117.11	121.31	125.59	4
5	92.07	95.80	99.59	103.46	107.41	111.43	115.52	119.69	123.93	128.24	5
6	94.46	98.22	102.06	105.96	109.94	114.00	118.13	122.33	126.61	130.96	6
7	96.93	100.72	104.59	108.54	112.56	116.65	120.81	125.06	129.37	133.76	7
8	99.46	103.30	107.20	111.19	115.24	119.37	123.57	127.85	132.20	136.63	8
9	102.07	105.94	109.89	113.91	118.00	122.17	126.41	130.72	135.11	139.57	9
10	104.76	108.67	112.65	116.70	120.83	125.04	129.31	133.67	138.09	142.59	10
11	107.52	111.46	115.48	119.57	123.74	127.98	132.30	136.69	141.15	145.69	11
12	110.35	114.33	118.39	122.52	126.72	131.00	135.35	139.78	144.28	148.85	12
13	113.26	117.28	121.37	125.54	129.78	134.09	138.48	142.94	147.48	152.09	13
14	116.24	120.30	124.43	128.63	132.91	137.26	141.69	146.19	150.76	155.41	14
15	119.30	123.39	127.56	131.80	136.11	140.50	144.96	149.50	154.11	158.80	15
16	122.43	126.56	130.76	135.04	139.39	143.81	148.31	152.89	157.54	162.26	16
17	125.63	129.80	134.04	138.35	142.74	147.20	151.74	156.35	161.04	165.80	17
18	128.91	133.11	137.39	141.74	146.17	150.67	155.24	159.89	164.61	169.41	18
19	132.26	136.50	140.81	145.20	149.67	154.20	158.81	163.50	168.26	173.09	19
20	135.69	139.96	144.31	148.74	153.24	157.81	162.46	167.19	171.98	176.85	20
21	139.19	143.50	147.89	152.35	156.89	161.50	166.19	170.94	175.78	180.69	21
22	142.76	147.11	151.54	156.04	160.61	165.26	169.98	174.78	179.65	184.59	22
23	146.41	150.80	155.26	159.80	164.41	169.09	173.85	178.69	183.59	188.57	23
24	150.13	154.56	159.06	163.63	168.28	173.00	177.80	182.67	187.61	192.63	24
25	153.93	158.39	162.93	167.54	172.22	176.98	181.81	186.72	191.70	196.76	25
26	157.80	162.30	166.87	171.52	176.24	181.04	185.91	190.85	195.87	200.96	26
27	161.74	166.28	170.89	175.57	180.33	185.17	190.07	195.06	200.11	205.24	27
28	165.76	170.33	174.98	179.70	184.50	189.37	194.31	199.33	204.43	209.59	28
29	169.85	174.46	179.15	183.91	188.74	193.65	198.63	203.69	208.81	214.02	29
30	174.02	178.67	183.39	188.19	193.06	198.00	203.02	208.11	213.28	218.52	30
31	178.26	182.94	187.70	192.54	197.44	202.43	207.48	212.61	217.81	223.09	31
32	182.57	187.30	192.09	196.96	201.91	206.93	212.02	217.19	222.43	227.74	32
33	186.96	191.72	196.56	201.46	206.44	211.50	216.63	221.83	227.11	232.46	33
34	191.43	196.22	201.09	206.04	211.06	216.15	221.31	226.56	231.87	237.26	34
35	195.96	200.80	205.70	210.69	215.74	220.87	226.07	231.35	236.70	242.13	35
36	200.57	205.44	210.39	215.41	220.50	225.67	230.91	236.22	241.61	247.07	36
37	205.26	210.17	215.15	220.20	225.33	230.54	235.81	241.17	246.59	252.09	37
38	210.02	214.96	219.98	225.07	230.24	235.48	240.80	246.19	251.65	257.19	38
39	214.85	219.83	224.89	230.02	235.22	240.50	245.85	251.28	256.78	262.35	39
40	219.76	224.78	229.87	235.04	240.28	245.59	250.98	256.44	261.98	267.59	40
41	224.74	229.80	234.93	240.13	245.41	250.76	256.19	261.69	267.26	272.91	41
42	229.80	234.89	240.06	245.30	250.61	256.00	261.46	267.00	272.61	278.30	42
43	234.93	240.06	245.26	250.54	255.89	261.31	266.81	272.39	278.04	283.76	43
44	240.13	245.30	250.54	255.85	261.24	266.70	272.24	277.85	283.54	289.30	44
45	245.41	250.61	255.89	261.24	266.67	272.17	277.74	283.39	289.11	294.91	45
46	250.76	256.00	261.31	266.70	272.17	277.70	283.31	289.00	294.76	300.59	46
47	256.19	261.46	266.81	272.24	277.74	283.31	288.96	294.69	300.48	306.35	47
48	261.69	267.00	272.39	277.85	283.39	289.00	294.69	300.44	306.28	312.19	48
49	267.26	272.61	278.04	283.54	289.11	294.76	300.48	306.28	312.15	318.09	49
50	272.91	278.30	283.76	289.30	294.91	300.59	306.35	312.19	318.09	324.07	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XIX.—BASE 30—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.59	1.26	2.00	2.81	3.70	4.67	5.70	6.81	8.00	9.26	0
1	1.22	1.93	2.70	3.56	4.48	5.48	6.56	7.70	8.93	10.22	1
2	1.93	2.67	3.48	4.37	5.33	6.37	7.48	8.67	9.93	11.26	2
3	2.70	3.48	4.33	5.26	6.26	7.33	8.48	9.70	11.00	12.37	3
4	3.56	4.37	5.26	6.22	7.26	8.37	9.56	10.81	12.15	13.56	4
5	4.48	5.33	6.26	7.26	8.33	9.48	10.70	12.00	13.37	14.81	5
6	5.48	6.37	7.33	8.37	9.48	10.67	11.93	13.26	14.67	16.15	6
7	6.56	7.48	8.48	9.56	10.70	11.93	13.22	14.59	16.04	17.56	7
8	7.70	8.67	9.70	10.81	12.00	13.26	14.59	16.00	17.48	19.04	8
9	8.93	9.93	11.00	12.15	13.37	14.67	16.04	17.48	19.00	20.59	9
10	10.22	11.26	12.37	13.56	14.81	16.15	17.56	19.04	20.59	22.22	10
11	11.59	12.67	13.81	15.04	16.33	17.70	19.15	20.67	22.26	23.93	11
12	13.04	14.15	15.33	16.59	17.93	19.33	20.81	22.37	24.00	25.70	12
13	14.56	15.70	16.93	18.22	19.59	21.04	22.56	24.15	25.81	27.56	13
14	16.15	17.33	18.59	19.93	21.33	22.81	24.37	26.00	27.70	29.48	14
15	17.81	19.04	20.33	21.70	23.15	24.67	26.26	27.93	29.67	31.48	15
16	19.56	20.81	22.15	23.56	25.04	26.59	28.22	29.93	31.70	33.56	16
17	21.37	22.67	24.04	25.48	27.00	28.59	30.26	32.00	33.81	35.70	17
18	23.26	24.59	26.00	27.48	29.04	30.67	32.37	34.15	36.00	37.93	18
19	25.22	26.59	28.04	29.56	31.15	32.81	34.56	36.37	38.26	40.22	19
20	27.26	28.67	30.15	31.70	33.33	35.04	36.81	38.67	40.59	42.59	20
21	29.37	30.81	32.33	33.93	35.59	37.33	39.15	41.04	43.00	45.04	21
22	31.56	33.04	34.59	36.22	37.93	39.70	41.56	43.48	45.48	47.56	22
23	33.81	35.33	36.93	38.59	40.33	42.15	44.04	46.00	48.04	50.15	23
24	36.15	37.70	39.33	41.04	42.81	44.67	46.59	48.59	50.67	52.81	24
25	38.56	40.15	41.81	43.56	45.37	47.26	49.22	51.26	53.37	55.56	25
26	41.04	42.67	44.37	46.15	48.00	49.93	51.93	54.00	56.15	58.37	26
27	43.59	45.26	47.00	48.81	50.70	52.67	54.70	56.81	59.00	61.26	27
28	46.22	47.93	49.70	51.56	53.48	55.48	57.56	59.70	61.93	64.22	28
29	48.93	50.67	52.48	54.37	56.33	58.37	60.48	62.67	64.93	67.26	29
30	51.70	53.48	55.33	57.26	59.26	61.33	63.48	65.70	68.00	70.37	30
31	54.56	56.37	58.26	60.22	62.26	64.37	66.56	68.81	71.15	73.56	31
32	57.48	59.33	61.26	63.26	65.33	67.48	69.70	72.00	74.37	76.81	32
33	60.48	62.37	64.33	66.37	68.48	70.67	72.93	75.26	77.67	80.15	33
34	63.56	65.48	67.48	69.56	71.70	73.93	76.22	78.59	81.04	83.56	34
35	66.70	68.67	70.70	72.81	75.00	77.26	79.59	82.00	84.48	87.04	35
36	69.93	71.93	74.00	76.15	78.37	80.67	83.04	85.48	88.00	90.59	36
37	73.22	75.26	77.37	79.56	81.81	84.15	86.56	89.04	91.59	94.22	37
38	76.59	78.67	80.81	83.04	85.33	87.70	90.15	92.67	95.26	97.93	38
39	80.04	82.15	84.33	86.59	88.93	91.33	93.81	96.37	99.00	101.70	39
40	83.56	85.70	87.93	90.22	92.59	95.04	97.56	100.15	102.81	105.56	40
41	87.15	89.33	91.59	93.93	96.33	98.81	101.37	104.00	106.70	109.48	41
42	90.81	93.04	95.33	97.70	100.15	102.67	105.26	107.93	110.67	113.48	42
43	94.56	96.81	99.15	101.56	104.04	106.59	109.22	111.93	114.70	117.56	43
44	98.37	100.67	103.04	105.48	108.00	110.59	113.26	116.00	118.81	121.70	44
45	102.26	104.59	107.00	109.48	112.04	114.67	117.37	120.15	123.00	125.93	45
46	106.22	108.59	111.04	113.56	116.15	118.81	121.56	124.37	127.26	130.22	46
47	110.26	112.67	115.15	117.70	120.33	123.04	125.81	128.67	131.59	134.59	47
48	114.37	116.81	119.33	121.93	124.59	127.33	130.15	133.04	136.00	139.04	48
49	118.56	121.04	123.59	126.22	128.93	131.70	134.56	137.48	140.48	143.56	49
50	122.81	125.33	127.93	130.59	133.33	136.15	139.04	142.00	145.04	148.15	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XIX.—BASE 30—SLOPES 3 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	10.59	12.00	13.48	15.04	16.67	18.37	20.15	22.00	23.93	25.93	0
1	11.59	13.04	14.56	16.15	17.81	19.56	21.37	23.26	25.22	27.26	1
2	12.67	14.15	15.70	17.33	19.04	20.81	22.67	24.59	26.59	28.67	2
3	13.81	15.33	16.93	18.59	20.33	22.15	24.04	26.00	28.04	30.15	3
4	15.04	16.59	18.22	19.93	21.70	23.56	25.48	27.48	29.56	31.70	4
5	16.33	17.93	19.59	21.33	23.15	25.04	27.00	29.04	31.15	33.33	5
6	17.70	19.33	21.04	22.81	24.67	26.59	28.59	30.67	32.81	35.04	6
7	19.15	20.81	22.56	24.37	26.26	28.22	30.26	32.37	34.56	36.81	7
8	20.67	22.37	24.15	26.00	27.93	29.93	32.00	34.15	36.37	38.67	8
9	22.26	24.00	25.81	27.70	29.67	31.70	33.81	36.00	38.26	40.59	9
10	23.93	25.70	27.56	29.48	31.48	33.56	35.70	37.93	40.22	42.59	10
11	25.67	27.48	29.37	31.33	33.37	35.48	37.67	39.93	42.26	44.67	11
12	27.48	29.33	31.26	33.26	35.33	37.48	39.70	42.00	44.37	46.81	12
13	29.37	31.26	33.22	35.26	37.37	39.56	41.81	44.15	46.56	49.04	13
14	31.33	33.26	35.26	37.33	39.48	41.70	44.00	46.37	48.81	51.33	14
15	33.37	35.33	37.37	39.48	41.67	43.93	46.26	48.67	51.15	53.70	15
16	35.48	37.48	39.56	41.70	43.93	46.22	48.59	51.04	53.56	56.15	16
17	37.67	39.70	41.81	44.00	46.26	48.59	51.00	53.48	56.04	58.67	17
18	39.93	42.00	44.15	46.37	48.67	51.04	53.48	56.00	58.59	61.26	18
19	42.26	44.37	46.56	48.81	51.15	53.56	56.04	58.59	61.22	63.93	19
20	44.67	46.81	49.04	51.33	53.70	56.15	58.67	61.26	63.93	66.67	20
21	47.15	49.33	51.59	53.93	56.33	58.81	61.37	64.00	66.70	69.48	21
22	49.70	51.93	54.22	56.59	59.04	61.56	64.15	66.81	69.56	72.37	22
23	52.33	54.59	56.93	59.33	61.81	64.37	67.00	69.70	72.48	75.33	23
24	55.04	57.33	59.70	62.15	64.67	67.26	69.93	72.67	75.48	78.37	24
25	57.81	60.15	62.56	65.04	67.59	70.22	72.93	75.70	78.56	81.48	25
26	60.67	63.04	65.48	68.00	70.59	73.26	76.00	78.81	81.70	84.67	26
27	63.59	66.00	68.48	71.04	73.67	76.37	79.15	82.00	84.93	87.93	27
28	66.59	69.04	71.56	74.15	76.81	79.56	82.37	85.26	88.22	91.26	28
29	69.67	72.15	74.70	77.33	80.04	82.81	85.67	88.59	91.59	94.67	29
30	72.81	75.33	77.93	80.59	83.33	86.15	89.04	92.00	95.04	98.15	30
31	76.04	78.59	81.22	83.93	86.70	89.56	92.48	95.48	98.56	101.70	31
32	79.33	81.93	84.59	87.33	90.15	93.04	96.00	99.04	102.15	105.33	32
33	82.70	85.33	88.04	90.81	93.67	96.59	99.59	102.67	105.81	109.04	33
34	86.15	88.81	91.56	94.37	97.26	100.22	103.26	106.37	109.56	112.81	34
35	89.67	92.37	95.15	98.00	100.93	103.93	107.00	110.15	113.37	116.67	35
36	93.26	96.00	98.81	101.70	104.67	107.70	110.81	114.00	117.26	120.59	36
37	96.93	99.70	102.56	105.48	108.48	111.56	114.70	117.93	121.22	124.59	37
38	100.67	103.48	106.37	109.33	112.37	115.48	118.67	121.93	125.26	128.67	38
39	104.48	107.33	110.26	113.26	116.33	119.48	122.70	126.00	129.37	132.81	39
40	108.37	111.26	114.22	117.26	120.37	123.56	126.81	130.15	133.56	137.04	40
41	112.33	115.26	118.26	121.33	124.48	127.70	131.00	134.37	137.81	141.33	41
42	116.37	119.33	122.37	125.48	128.67	131.93	135.26	138.67	142.15	145.70	42
43	120.48	123.48	126.56	129.70	132.93	136.22	139.59	143.04	146.56	150.15	43
44	124.67	127.70	130.81	134.00	137.26	140.59	144.00	147.48	151.04	154.67	44
45	128.93	132.00	135.15	138.37	141.67	145.04	148.48	152.00	155.59	159.26	45
46	133.26	136.37	139.56	142.81	146.15	149.56	153.04	156.59	160.22	163.93	46
47	137.67	140.81	144.04	147.33	150.70	154.15	157.67	161.26	164.93	168.67	47
48	142.15	145.33	148.59	151.93	155.33	158.81	162.37	166.00	169.70	173.48	48
49	146.70	149.93	153.22	156.59	160.04	163.56	167.15	170.81	174.56	178.37	49
50	151.33	154.59	157.93	161.33	164.81	168.37	172.00	175.70	179.48	183.33	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XIX.—BASE 30—SLOPES 3 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	28.00	30.15	32.37	34.67	37.04	39.48	42.00	44.59	47.26	50.00	0
1	29.37	31.56	33.81	36.15	38.56	41.04	43.59	46.22	48.93	51.70	1
2	30.81	33.04	35.33	37.70	40.15	42.67	45.26	47.93	50.67	53.48	2
3	32.33	34.59	36.93	39.33	41.81	44.37	47.00	49.70	52.48	55.33	3
4	33.93	36.22	38.59	41.04	43.56	46.15	48.81	51.56	54.37	57.26	4
5	35.59	37.93	40.33	42.81	45.37	48.00	50.70	53.48	56.33	59.26	5
6	37.33	39.70	42.15	44.67	47.26	49.93	52.67	55.48	58.37	61.33	6
7	39.15	41.56	44.04	46.59	49.22	51.93	54.70	57.56	60.48	63.48	7
8	41.04	43.48	46.00	48.59	51.26	54.00	56.81	59.70	62.67	65.70	8
9	43.00	45.48	48.04	50.67	53.37	56.15	59.00	61.93	64.93	68.00	9
10	45.04	47.56	50.15	52.81	55.56	58.37	61.26	64.22	67.26	70.37	10
11	47.15	49.70	52.33	55.04	57.81	60.67	63.59	66.59	69.67	72.81	11
12	49.33	51.93	54.59	57.33	60.15	63.04	66.00	69.04	72.15	75.33	12
13	51.59	54.22	56.93	59.70	62.56	65.48	68.48	71.56	74.70	77.93	13
14	53.93	56.59	59.33	62.15	65.04	68.00	71.04	74.15	77.33	80.59	14
15	56.33	59.04	61.81	64.67	67.59	70.59	73.67	76.81	80.04	83.33	15
16	58.81	61.56	64.37	67.26	70.22	73.26	76.37	79.56	82.81	86.15	16
17	61.37	64.15	67.00	69.93	72.93	76.00	79.15	82.37	85.67	89.04	17
18	64.00	66.81	69.70	72.67	75.70	78.81	82.00	85.26	88.59	92.00	18
19	66.70	69.56	72.48	75.48	78.56	81.70	84.93	88.22	91.59	95.04	19
20	69.48	72.37	75.33	78.37	81.48	84.67	87.93	91.26	94.67	98.15	20
21	72.33	75.26	78.26	81.33	84.48	87.70	91.00	94.37	97.81	101.33	21
22	75.26	78.22	81.26	84.37	87.56	90.81	94.15	97.56	101.04	104.59	22
23	78.26	81.26	84.33	87.48	90.70	94.00	97.37	100.81	104.33	107.93	23
24	81.33	84.37	87.48	90.67	93.93	97.26	100.67	104.15	107.70	111.33	24
25	84.48	87.56	90.70	93.93	97.22	100.59	104.04	107.56	111.15	114.81	25
26	87.70	90.81	94.00	97.26	100.59	104.00	107.48	111.04	114.67	118.37	26
27	91.00	94.15	97.37	100.67	104.04	107.48	111.00	114.59	118.26	122.00	27
28	94.37	97.56	100.81	104.15	107.56	111.04	114.59	118.22	121.93	125.70	28
29	97.81	101.04	104.33	107.70	111.15	114.67	118.26	121.93	125.67	129.48	29
30	101.33	104.59	107.93	111.33	114.81	118.37	122.00	125.70	129.48	133.33	30
31	104.93	108.22	111.59	115.04	118.56	122.15	125.81	129.56	133.37	137.26	31
32	108.59	111.93	115.33	118.81	122.37	126.00	129.70	133.48	137.33	141.26	32
33	112.33	115.70	119.15	122.67	126.26	129.93	133.67	137.48	141.37	145.33	33
34	116.15	119.56	123.04	126.59	130.22	133.93	137.70	141.56	145.48	149.48	34
35	120.04	123.48	127.00	130.59	134.26	138.00	141.81	145.70	149.67	153.70	35
36	124.00	127.48	131.04	134.67	138.37	142.15	146.00	149.93	153.93	158.00	36
37	128.04	131.56	135.15	138.81	142.56	146.37	150.26	154.22	158.26	162.37	37
38	132.15	135.70	139.33	143.04	146.81	150.67	154.59	158.59	162.67	166.81	38
39	136.33	139.93	143.59	147.33	151.15	155.04	159.00	163.04	167.15	171.33	39
40	140.59	144.22	147.93	151.70	155.56	159.48	163.48	167.56	171.70	175.93	40
41	144.93	148.59	152.33	156.15	160.04	164.00	168.04	172.15	176.33	180.59	41
42	149.33	153.04	156.81	160.67	164.59	168.59	172.67	176.81	181.04	185.33	42
43	153.81	157.56	161.37	165.26	169.22	173.26	177.37	181.56	185.81	190.15	43
44	158.37	162.15	166.00	169.93	173.93	178.00	182.15	186.37	190.67	195.04	44
45	163.00	166.81	170.70	174.67	178.70	182.81	187.00	191.26	195.59	200.00	45
46	167.70	171.56	175.48	179.48	183.56	187.70	191.93	196.22	200.59	205.04	46
47	172.48	176.37	180.33	184.37	188.48	192.67	196.93	201.26	205.67	210.15	47
48	177.33	181.26	185.26	189.33	193.48	197.70	202.00	206.37	210.81	215.33	48
49	182.26	186.22	190.26	194.37	198.56	202.81	207.15	211.56	216.04	220.59	49
50	187.26	191.26	195.33	199.48	203.70	208.00	212.37	216.81	221.33	225.93	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XIX.—BASE 30—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	52.81	55.70	58.67	61.70	64.81	68.00	71.26	74.59	78.00	81.48	0
1	54.56	57.48	60.48	63.56	66.70	69.93	73.22	76.59	80.04	83.56	1
2	56.37	59.33	62.37	65.48	68.67	71.93	75.26	78.67	82.15	85.70	2
3	58.26	61.26	64.33	67.48	70.70	74.00	77.37	80.81	84.33	87.93	3
4	60.22	63.26	66.37	69.56	72.81	76.15	79.56	83.04	86.59	90.22	4
5	62.26	65.33	68.48	71.70	75.00	78.37	81.81	85.33	88.93	92.59	5
6	64.37	67.48	70.67	73.93	77.26	80.67	84.15	87.70	91.33	95.04	6
7	66.56	69.70	72.93	76.22	79.59	83.04	86.56	90.15	93.81	97.56	7
8	68.81	72.00	75.26	78.59	82.00	85.48	89.04	92.67	96.37	100.15	8
9	71.15	74.37	77.67	81.04	84.48	88.00	91.59	95.26	99.00	102.81	9
10	73.56	76.81	80.15	83.56	87.04	90.59	94.22	97.93	101.70	105.56	10
11	76.04	79.33	82.70	86.15	89.67	93.26	96.93	100.67	104.48	108.37	11
12	78.59	81.93	85.33	88.81	92.37	96.00	99.70	103.48	107.33	111.26	12
13	81.22	84.59	88.04	91.56	95.15	98.81	102.56	106.37	110.26	114.22	13
14	83.93	87.33	90.81	94.37	98.00	101.70	105.48	109.33	113.26	117.26	14
15	86.70	90.15	93.67	97.26	100.93	104.67	108.48	112.37	116.33	120.37	15
16	89.56	93.04	96.59	100.22	103.93	107.70	111.56	115.48	119.48	123.56	16
17	92.48	96.00	99.59	103.26	107.00	110.81	114.70	118.67	122.70	126.81	17
18	95.48	99.04	102.67	106.37	110.15	114.00	117.93	121.93	126.00	130.15	18
19	98.56	102.15	105.81	109.56	113.37	117.26	121.22	125.26	129.37	133.56	19
20	101.70	105.33	109.04	112.81	116.67	120.59	124.59	128.67	132.81	137.04	20
21	104.93	108.59	112.33	116.15	120.04	124.00	128.04	132.15	136.33	140.59	21
22	108.22	111.93	115.70	119.56	123.48	127.48	131.56	135.70	139.93	144.22	22
23	111.59	115.33	119.15	123.04	127.00	131.04	135.15	139.33	143.59	147.93	23
24	115.04	118.81	122.67	126.59	130.59	134.67	138.81	143.04	147.33	151.70	24
25	118.56	122.37	126.26	130.22	134.26	138.37	142.56	146.81	151.15	155.56	25
26	122.15	126.00	129.93	133.93	138.00	142.15	146.37	150.67	155.04	159.48	26
27	125.81	129.70	133.67	137.70	141.81	146.00	150.26	154.59	159.00	163.48	27
28	129.56	133.48	137.48	141.56	145.70	149.93	154.22	158.59	163.04	167.56	28
29	133.37	137.33	141.37	145.48	149.67	153.93	158.26	162.67	167.15	171.70	29
30	137.26	141.26	145.33	149.48	153.70	158.00	162.37	166.81	171.33	175.93	30
31	141.22	145.26	149.37	153.56	157.81	162.15	166.56	171.04	175.59	180.22	31
32	145.26	149.33	153.48	157.70	162.00	166.37	170.81	175.33	179.93	184.59	32
33	149.37	153.48	157.67	161.93	166.26	170.67	175.15	179.70	184.33	189.04	33
34	153.56	157.70	161.93	166.22	170.59	175.04	179.56	184.15	188.81	193.56	34
35	157.81	162.00	166.26	170.59	175.00	179.48	184.04	188.67	193.37	198.15	35
36	162.15	166.37	170.67	175.04	179.48	184.00	188.59	193.26	198.00	202.81	36
37	166.56	170.81	175.15	179.56	184.04	188.59	193.22	197.93	202.70	207.56	37
38	171.04	175.33	179.70	184.15	188.67	193.26	197.93	202.67	207.48	212.37	38
39	175.59	179.93	184.33	188.81	193.37	198.00	202.70	207.48	212.33	217.26	39
40	180.22	184.59	189.04	193.56	198.15	202.81	207.56	212.37	217.26	222.22	40
41	184.93	189.33	193.81	198.37	203.00	207.70	212.48	217.33	222.26	227.26	41
42	189.70	194.15	198.67	203.26	207.93	212.67	217.48	222.37	227.33	232.37	42
43	194.56	199.04	203.59	208.22	212.93	217.70	222.56	227.48	232.48	237.56	43
44	199.48	204.00	208.59	213.26	218.00	222.81	227.70	232.67	237.70	242.81	44
45	204.48	209.04	213.67	218.37	223.15	228.00	232.93	237.93	243.00	248.15	45
46	209.56	214.15	218.81	223.56	228.37	233.26	238.22	243.26	248.37	253.56	46
47	214.70	219.33	224.04	228.81	233.67	238.59	243.59	248.67	253.81	259.04	47
48	219.93	224.59	229.33	234.15	239.04	244.00	249.04	254.15	259.33	264.59	48
49	225.22	229.93	234.70	239.56	244.48	249.48	254.56	259.70	264.93	270.22	49
50	230.59	235.33	240.15	245.04	250.00	255.04	260.15	265.33	270.59	275.93	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XIX.—BASE 30—SLOPES 3 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	85.04	88.67	92.37	96.15	100.00	103.93	107.93	112.00	116.15	120.37	0
1	87.15	90.81	94.56	98.37	102.26	106.22	110.26	114.37	118.56	122.81	1
2	89.33	93.04	96.81	100.67	104.59	108.59	112.67	116.81	121.04	125.33	2
3	91.59	95.33	99.15	103.04	107.00	111.04	115.15	119.33	123.59	127.93	3
4	93.93	97.70	101.56	105.48	109.48	113.56	117.70	121.93	126.22	130.59	4
5	96.33	100.15	104.04	108.00	112.04	116.15	120.33	124.59	128.93	133.33	5
6	98.81	102.67	106.59	110.59	114.67	118.81	123.04	127.33	131.70	136.15	6
7	101.37	105.26	109.22	113.26	117.37	121.56	125.81	130.15	134.56	139.04	7
8	104.00	107.93	111.93	116.00	120.15	124.37	128.67	133.04	137.48	142.00	8
9	106.70	110.67	114.70	118.81	123.00	127.26	131.59	136.00	140.48	145.04	9
10	109.48	113.48	117.56	121.70	125.93	130.22	134.59	139.04	143.56	148.15	10
11	112.33	116.37	120.48	124.67	128.93	133.26	137.67	142.15	146.70	151.33	11
12	115.26	119.33	123.48	127.70	132.00	136.37	140.81	145.33	149.93	154.59	12
13	118.26	122.37	126.56	130.81	135.15	139.56	144.04	148.59	153.22	157.93	13
14	121.33	125.48	129.70	134.00	138.37	142.81	147.33	151.93	156.59	161.33	14
15	124.48	128.67	132.93	137.26	141.67	146.15	150.70	155.33	160.04	164.81	15
16	127.70	131.93	136.22	140.59	145.04	149.56	154.15	158.81	163.56	168.37	16
17	131.00	135.26	139.59	144.00	148.48	153.04	157.67	162.37	167.15	172.00	17
18	134.37	138.67	143.04	147.48	152.00	156.59	161.26	166.00	170.81	175.70	18
19	137.81	142.15	146.56	151.04	155.59	160.22	164.93	169.70	174.56	179.48	19
20	141.33	145.70	150.15	154.67	159.26	163.93	168.67	173.48	178.37	183.33	20
21	144.93	149.33	153.81	158.37	163.00	167.70	172.48	177.33	182.26	187.26	21
22	148.59	153.04	157.56	162.15	166.81	171.56	176.37	181.26	186.22	191.26	22
23	152.33	156.81	161.37	166.00	170.70	175.48	180.33	185.26	190.26	195.33	23
24	156.15	160.67	165.26	169.93	174.67	179.48	184.37	189.33	194.37	199.48	24
25	160.04	164.59	169.22	173.93	178.70	183.56	188.48	193.48	198.56	203.70	25
26	164.00	168.59	173.26	178.00	182.81	187.70	192.67	197.70	202.81	208.00	26
27	168.04	172.67	177.37	182.15	187.00	191.93	196.93	202.00	207.15	212.37	27
28	172.15	176.81	181.56	186.37	191.26	196.22	201.26	206.37	211.56	216.81	28
29	176.33	181.04	185.81	190.67	195.59	200.59	205.67	210.81	216.04	221.33	29
30	180.59	185.33	190.15	195.04	200.00	205.04	210.15	215.33	220.59	225.93	30
31	184.93	189.70	194.56	199.48	204.48	209.56	214.70	219.93	225.22	230.59	31
32	189.33	194.15	199.04	204.00	209.04	214.15	219.33	224.59	229.93	235.33	32
33	193.81	198.67	203.59	208.59	213.67	218.81	224.04	229.33	234.70	240.15	33
34	198.37	203.26	208.22	213.26	218.37	223.56	228.81	234.15	239.56	245.04	34
35	203.00	207.93	212.93	218.00	223.15	228.37	233.67	239.04	244.48	250.00	35
36	207.70	212.67	217.70	222.81	228.00	233.26	238.59	244.00	249.48	255.04	36
37	212.48	217.48	222.56	227.70	232.93	238.22	243.59	249.04	254.56	260.15	37
38	217.33	222.37	227.48	232.67	237.93	243.26	248.67	254.15	259.70	265.33	38
39	222.26	227.33	232.48	237.70	243.00	248.37	253.81	259.33	264.93	270.59	39
40	227.26	232.37	237.56	242.81	248.15	253.56	259.04	264.59	270.22	275.93	40
41	232.33	237.48	242.70	248.00	253.37	258.81	264.33	269.93	275.59	281.33	41
42	237.48	242.67	247.93	253.26	258.67	264.15	269.70	275.33	281.04	286.81	42
43	242.70	247.93	253.22	258.59	264.04	269.56	275.15	280.81	286.56	292.37	43
44	248.00	253.26	258.59	264.00	269.48	275.04	280.67	286.37	292.15	298.00	44
45	253.37	258.67	264.04	269.48	275.00	280.59	286.26	292.00	297.81	303.70	45
46	258.81	264.15	269.56	275.04	280.59	286.22	291.93	297.70	303.56	309.48	46
47	264.33	269.70	275.15	280.67	286.26	291.93	297.67	303.48	309.37	315.33	47
48	269.93	275.33	280.81	286.37	292.00	297.70	303.48	309.33	315.26	321.26	48
49	275.59	281.04	286.56	292.15	297.81	303.56	309.37	315.26	321.22	327.26	49
50	281.33	286.81	292.37	298.00	303.70	309.48	315.33	321.26	327.26	333.33	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XX.—BASE 36—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.70	1.48	2.33	3.26	4.26	5.33	6.48	7.70	9.00	10.37	0
1	1.44	2.26	3.15	4.11	5.15	6.26	7.44	8.70	10.04	11.44	1
2	2.26	3.11	4.04	5.04	6.11	7.26	8.48	9.78	11.15	12.59	2
3	3.15	4.04	5.00	6.04	7.15	8.33	9.59	10.93	12.33	13.81	3
4	4.11	5.04	6.04	7.11	8.26	9.48	10.78	12.15	13.59	15.11	4
5	5.15	6.11	7.15	8.26	9.44	10.70	12.04	13.44	14.93	16.48	5
6	6.26	7.26	8.33	9.48	10.70	12.00	13.37	14.81	16.33	17.93	6
7	7.44	8.48	9.59	10.78	12.04	13.37	14.78	16.26	17.81	19.44	7
8	8.70	9.78	10.92	12.15	13.44	14.81	16.26	17.78	19.37	21.04	8
9	10.04	11.15	12.33	13.59	14.93	16.33	17.81	19.37	21.00	22.70	9
10	11.44	12.59	13.81	15.11	16.48	17.93	19.44	21.04	22.70	24.44	10
11	12.93	14.11	15.37	16.70	18.11	19.59	21.15	22.78	24.48	26.26	11
12	14.48	15.70	17.00	18.37	19.81	21.33	22.93	24.59	26.33	28.15	12
13	16.11	17.37	18.70	20.11	21.59	23.15	24.78	26.48	28.26	30.11	13
14	17.81	19.11	20.48	21.93	23.44	25.04	26.70	28.44	30.26	32.15	14
15	19.59	20.93	22.33	23.81	25.37	27.00	28.70	30.48	32.33	34.26	15
16	21.44	22.81	24.26	25.78	27.37	29.04	30.78	32.59	34.48	36.44	16
17	23.37	24.78	26.26	27.81	29.44	31.15	32.93	34.78	36.70	38.70	17
18	25.37	26.81	28.33	29.93	31.59	33.33	35.15	37.04	39.00	41.04	18
19	27.44	28.93	30.48	32.11	33.81	35.59	37.44	39.37	41.37	43.44	19
20	29.59	31.11	32.70	34.37	36.11	37.93	39.81	41.78	43.81	45.93	20
21	31.81	33.37	35.00	36.70	38.48	40.33	42.26	44.26	46.33	48.48	21
22	34.11	35.70	37.37	39.11	40.93	42.81	44.78	46.81	48.93	51.11	22
23	36.48	38.11	39.81	41.59	43.44	45.37	47.37	49.44	51.59	53.81	23
24	38.93	40.59	42.33	44.15	46.04	48.00	50.04	52.15	54.33	56.59	24
25	41.44	43.15	44.93	46.78	48.70	50.70	52.78	54.93	57.15	59.44	25
26	44.04	45.78	47.59	49.48	51.44	53.48	55.59	57.78	60.04	62.37	26
27	46.70	48.48	50.33	52.26	54.26	56.33	58.48	60.70	63.00	65.37	27
28	49.44	51.26	53.15	55.11	57.15	59.26	61.44	63.70	66.04	68.44	28
29	52.26	54.11	56.04	58.04	60.11	62.26	64.48	66.78	69.15	71.59	29
30	55.15	57.04	59.00	61.04	63.15	65.33	67.59	69.93	72.33	74.81	30
31	58.11	60.04	62.04	64.11	66.26	68.48	70.78	73.15	75.59	78.11	31
32	61.15	63.11	65.15	67.26	69.44	71.70	74.04	76.44	78.93	81.48	32
33	64.26	66.26	68.33	70.48	72.70	75.00	77.37	79.81	82.33	84.93	33
34	67.44	69.48	71.59	73.78	76.04	78.37	80.78	83.26	85.81	88.44	34
35	70.70	72.78	74.93	77.15	79.44	81.81	84.26	86.78	89.37	92.04	35
36	74.04	76.15	78.33	80.59	82.93	85.33	87.81	90.37	93.00	95.70	36
37	77.44	79.59	81.81	84.11	86.48	88.93	91.44	94.04	96.70	99.44	37
38	80.93	83.11	85.37	87.70	90.11	92.59	95.15	97.78	100.48	103.26	38
39	84.48	86.70	89.00	91.37	93.81	96.33	98.93	101.59	104.33	107.15	39
40	88.11	90.37	92.70	95.11	97.59	100.15	102.78	105.48	108.26	111.11	40
41	91.81	94.11	96.48	98.93	101.44	104.04	106.70	109.44	112.26	115.15	41
42	95.59	97.93	100.33	102.81	105.37	108.00	110.70	113.48	116.33	119.26	42
43	99.44	101.81	104.26	106.78	109.37	112.04	114.78	117.59	120.48	123.44	43
44	103.37	105.78	108.26	110.81	113.44	116.15	118.93	121.78	124.70	127.70	44
45	107.37	109.81	112.33	114.93	117.59	120.33	123.15	126.04	129.00	132.04	45
46	111.44	113.93	116.48	119.11	121.81	124.59	127.44	130.37	133.37	136.44	46
47	115.59	118.11	120.70	123.37	126.11	128.93	131.81	134.78	137.81	140.93	47
48	119.81	122.37	125.00	127.70	130.48	133.33	136.26	139.26	142.33	145.48	48
49	124.11	126.70	129.37	132.11	134.93	137.81	140.78	143.81	146.93	150.11	49
50	128.48	131.11	133.81	136.59	139.44	142.37	145.37	148.44	151.59	154.81	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XX.—BASE 36—SLOPES 3 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	11.81	13.33	14.93	16.59	18.33	20.15	22.04	24.00	26.04	28.15	0
1	12.93	14.48	16.11	17.81	19.59	21.44	23.37	25.37	27.44	29.59	1
2	14.11	15.70	17.37	19.11	20.93	22.81	24.78	26.81	28.93	31.11	2
3	15.37	17.00	18.70	20.48	22.33	24.26	26.26	28.33	30.48	32.70	3
4	16.70	18.37	20.11	21.93	23.81	25.78	27.81	29.93	32.11	34.37	4
5	18.11	19.81	21.59	23.44	25.37	27.37	29.44	31.59	33.81	36.11	5
6	19.59	21.33	23.15	25.04	27.00	29.04	31.15	33.33	35.59	37.93	6
7	21.15	22.93	24.78	26.70	28.70	30.78	32.93	35.15	37.44	39.81	7
8	22.78	24.59	26.48	28.44	30.48	32.59	34.78	37.04	39.37	41.78	8
9	24.48	26.33	28.26	30.26	32.33	34.48	36.70	39.00	41.37	43.81	9
10	26.26	28.15	30.11	32.15	34.26	36.44	38.70	41.04	43.44	45.93	10
11	28.11	30.04	32.04	34.11	36.26	38.48	40.78	43.15	45.59	48.11	11
12	30.04	32.00	34.04	36.15	38.33	40.59	42.93	45.33	47.81	50.37	12
13	32.04	34.04	36.11	38.26	40.48	42.78	45.15	47.59	50.11	52.70	13
14	34.11	36.15	38.26	40.44	42.70	45.04	47.44	49.93	52.48	55.11	14
15	36.26	38.33	40.48	42.70	45.00	47.37	49.81	52.33	54.93	57.59	15
16	38.48	40.59	42.78	45.04	47.37	49.78	52.26	54.81	57.44	60.15	16
17	40.78	42.93	45.15	47.44	49.81	52.26	54.78	57.37	60.04	62.78	17
18	43.15	45.33	47.59	49.93	52.33	54.81	57.37	60.00	62.70	65.48	18
19	45.59	47.81	50.11	52.48	54.93	57.44	60.04	62.70	65.44	68.26	19
20	48.11	50.37	52.70	55.11	57.59	60.15	62.78	65.48	68.26	71.11	20
21	50.70	53.00	55.37	57.81	60.33	62.93	65.59	68.33	71.15	74.04	21
22	53.37	55.70	58.11	60.59	63.15	65.78	68.48	71.26	74.11	77.04	22
23	56.11	58.48	60.93	63.44	66.04	68.70	71.44	74.26	77.15	80.11	23
24	58.93	61.33	63.81	66.37	69.00	71.70	74.48	77.33	80.26	83.26	24
25	61.81	64.26	66.78	69.37	72.04	74.78	77.59	80.48	83.44	86.48	25
26	64.78	67.26	69.81	72.44	75.15	77.93	80.78	83.70	86.70	89.78	26
27	67.81	70.33	72.93	75.59	78.33	81.15	84.04	87.00	90.04	93.15	27
28	70.93	73.48	76.11	78.81	81.59	84.44	87.37	90.37	93.44	96.59	28
29	74.11	76.70	79.37	82.11	84.93	87.81	90.78	93.81	96.93	100.11	29
30	77.37	80.00	82.70	85.48	88.33	91.26	94.26	97.33	100.48	103.70	30
31	80.70	83.37	86.11	88.93	91.81	94.78	97.81	100.93	104.11	107.37	31
32	84.11	86.81	89.59	92.44	95.37	98.37	101.44	104.59	107.81	111.11	32
33	87.59	90.33	93.15	96.04	99.00	102.04	105.15	108.33	111.59	114.93	33
34	91.15	93.93	96.78	99.70	102.70	105.78	108.93	112.15	115.44	118.81	34
35	94.78	97.59	100.48	103.44	106.48	109.59	112.78	116.04	119.37	122.78	35
36	98.48	101.33	104.26	107.26	110.33	113.48	116.70	120.00	123.37	126.81	36
37	102.26	105.15	108.11	111.15	114.26	117.44	120.70	124.04	127.44	130.93	37
38	106.11	109.04	112.04	115.11	118.26	121.48	124.78	128.15	131.59	135.11	38
39	110.04	113.00	116.04	119.15	122.33	125.59	128.93	132.33	135.81	139.37	39
40	114.04	117.04	120.11	123.26	126.48	129.78	133.15	136.59	140.11	143.70	40
41	118.11	121.15	124.26	127.44	130.70	134.04	137.44	140.93	144.48	148.11	41
42	122.26	125.33	128.48	131.70	135.00	138.37	141.81	145.33	148.93	152.59	42
43	126.48	129.59	132.78	136.04	139.37	142.78	146.26	149.81	153.44	157.15	43
44	130.78	133.93	137.15	140.44	143.81	147.26	150.78	154.37	158.04	161.78	44
45	135.15	138.33	141.59	144.93	148.33	151.81	155.37	159.00	162.70	166.48	45
46	139.59	142.81	146.11	149.48	152.93	156.44	160.04	163.70	167.44	171.26	46
47	144.11	147.37	150.70	154.11	157.59	161.15	164.78	168.48	172.26	176.11	47
48	148.70	152.00	155.37	158.81	162.33	165.93	169.59	173.33	177.15	181.04	48
49	153.37	156.70	160.11	163.59	167.15	170.78	174.48	178.26	182.11	186.04	49
50	158.11	161.48	164.93	168.44	172.04	175.70	179.44	183.26	187.15	191.11	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XX.—BASE 36—SLOPES 3 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	30.33	32.59	34.93	37.33	39.81	42.37	45.00	47.70	50.48	53.33	0
1	31.81	34.11	36.48	38.93	41.44	44.04	46.70	49.44	52.26	55.15	1
2	33.37	35.70	38.11	40.59	43.15	45.78	48.48	51.26	54.11	57.04	2
3	35.00	37.37	39.81	42.33	44.93	47.59	50.33	53.15	56.04	59.00	3
4	36.70	39.11	41.59	44.15	46.78	49.48	52.26	55.11	58.04	61.04	4
5	38.48	40.93	43.44	46.04	48.70	51.44	54.26	57.15	60.11	63.15	5
6	40.33	42.81	45.37	48.00	50.70	53.48	56.33	59.26	62.26	65.33	6
7	42.26	44.78	47.37	50.04	52.78	55.59	58.48	61.44	64.48	67.59	7
8	44.26	46.81	49.44	52.15	54.93	57.78	60.70	63.70	66.78	69.93	8
9	46.33	48.93	51.59	54.33	57.15	60.04	63.00	66.04	69.15	72.33	9
10	48.48	51.11	53.81	56.59	59.44	62.37	65.37	68.44	71.59	74.81	10
11	50.70	53.37	56.11	58.93	61.81	64.78	67.81	70.93	74.11	77.37	11
12	53.00	55.70	58.48	61.33	64.26	67.26	70.33	73.48	76.70	80.00	12
13	55.37	58.11	60.93	63.81	66.78	69.81	72.93	76.11	79.37	82.70	13
14	57.81	60.59	63.44	66.37	69.37	72.44	75.59	78.81	82.11	85.48	14
15	60.33	63.15	66.04	69.00	72.04	75.15	78.33	81.59	84.93	88.33	15
16	62.93	65.78	68.70	71.70	74.78	77.93	81.15	84.44	87.81	91.26	16
17	65.59	68.48	71.44	74.48	77.59	80.78	84.04	87.37	90.78	94.26	17
18	68.33	71.26	74.26	77.33	80.48	83.70	87.00	90.37	93.81	97.33	18
19	71.15	74.11	77.15	80.26	83.44	86.70	90.04	93.44	96.93	100.48	19
20	74.04	77.04	80.11	83.26	86.48	89.78	93.15	96.59	100.11	103.70	20
21	77.00	80.04	83.15	86.33	89.59	92.93	96.33	99.81	103.37	107.00	21
22	80.04	83.11	86.26	89.48	92.78	96.15	99.59	103.11	106.70	110.37	22
23	83.15	86.26	89.44	92.70	96.04	99.44	102.93	106.48	110.11	113.81	23
24	86.33	89.48	92.70	96.00	99.37	102.81	106.33	109.93	113.59	117.33	24
25	89.59	92.78	96.04	99.37	102.78	106.26	109.81	113.44	117.15	120.93	25
26	92.93	96.15	99.44	102.81	106.26	109.78	113.37	117.04	120.78	124.59	26
27	96.33	99.59	102.93	106.33	109.81	113.37	117.00	120.70	124.48	128.33	27
28	99.81	103.11	106.48	109.93	113.44	117.04	120.70	124.44	128.26	132.15	28
29	103.37	106.70	110.11	113.59	117.15	120.78	124.48	128.26	132.11	136.04	29
30	107.00	110.37	113.81	117.33	120.93	124.59	128.33	132.15	136.04	140.00	30
31	110.70	114.11	117.59	121.15	124.78	128.48	132.26	136.11	140.04	144.04	31
32	114.48	117.93	121.44	125.04	128.70	132.44	136.26	140.15	144.11	148.15	32
33	118.33	121.81	125.37	129.00	132.70	136.48	140.33	144.26	148.26	152.33	33
34	122.26	125.78	129.37	133.04	136.78	140.59	144.48	148.44	152.48	156.59	34
35	126.26	129.81	133.44	137.15	140.93	144.78	148.70	152.70	156.78	160.93	35
36	130.33	133.93	137.59	141.33	145.15	149.04	153.00	157.04	161.15	165.33	36
37	134.48	138.11	141.81	145.59	149.44	153.37	157.37	161.44	165.59	169.81	37
38	138.70	142.37	146.11	149.93	153.81	157.78	161.81	165.93	170.11	174.37	38
39	143.00	146.70	150.48	154.33	158.26	162.26	166.33	170.48	174.70	179.00	39
40	147.37	151.11	154.93	158.81	162.78	166.81	170.93	175.11	179.37	183.70	40
41	151.81	155.59	159.44	163.37	167.37	171.44	175.59	179.81	184.11	188.48	41
42	156.33	160.15	164.04	168.00	172.04	176.15	180.33	184.59	188.93	193.33	42
43	160.93	164.78	168.70	172.70	176.78	180.93	185.15	189.44	193.81	198.26	43
44	165.59	169.48	173.44	177.48	181.59	185.78	190.04	194.37	198.78	203.26	44
45	170.33	174.26	178.26	182.33	186.48	190.70	195.00	199.37	203.81	208.33	45
46	175.15	179.11	183.15	187.26	191.44	195.70	200.04	204.44	208.93	213.48	46
47	180.04	184.04	188.11	192.26	196.48	200.78	205.15	209.59	214.11	218.70	47
48	185.00	189.04	193.15	197.33	201.59	205.93	210.33	214.81	219.37	224.00	48
49	190.04	194.11	198.26	202.48	206.78	211.15	215.59	220.11	224.70	229.37	49
50	195.15	199.26	203.44	207.70	212.04	216.44	220.93	225.48	230.11	234.81	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XX.—BASE 36—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	56.26	59.26	62.33	65.48	68.70	72.00	75.37	78.81	82.33	85.93	0
1	58.11	61.15	64.26	67.44	70.70	74.04	77.44	80.93	84.48	88.11	1
2	60.04	63.11	66.26	69.48	72.78	76.15	79.59	83.11	86.70	90.37	2
3	62.04	65.15	68.33	71.59	74.93	78.33	81.81	85.37	89.00	92.70	3
4	64.11	67.26	70.48	73.73	77.15	80.59	84.11	87.70	91.37	95.11	4
5	66.26	69.44	72.70	76.04	79.44	82.93	86.48	90.11	93.81	97.59	5
6	68.48	71.70	75.00	78.37	81.81	85.33	88.93	92.59	96.33	100.15	6
7	70.78	74.04	77.37	80.78	84.26	87.81	91.44	95.15	98.93	102.78	7
8	73.15	76.44	79.81	83.26	86.78	90.37	94.04	97.78	101.59	105.48	8
9	75.59	78.93	82.33	85.81	89.37	93.00	96.70	100.48	104.33	108.26	9
10	78.11	81.48	84.93	88.44	92.04	95.70	99.44	103.26	107.15	111.11	10
11	80.70	84.11	87.59	91.15	94.78	98.48	102.26	106.11	110.04	114.04	11
12	83.37	86.81	90.33	93.93	97.59	101.33	105.15	109.04	113.00	117.04	12
13	86.11	89.59	93.15	96.78	100.48	104.26	108.11	112.04	116.04	120.11	13
14	88.93	92.44	96.04	99.70	103.44	107.26	111.15	115.11	119.15	123.26	14
15	91.81	95.37	99.00	102.70	106.48	110.33	114.26	118.26	122.33	126.48	15
16	94.78	98.37	102.04	105.78	109.59	113.48	117.44	121.48	125.59	129.78	16
17	97.81	101.44	105.15	108.93	112.78	116.70	120.70	124.78	128.93	133.15	17
18	100.93	104.59	108.33	112.15	116.04	120.00	124.04	128.15	132.33	136.59	18
19	104.11	107.81	111.59	115.44	119.37	123.37	127.44	131.59	135.81	140.11	19
20	107.37	111.11	114.93	118.81	122.78	126.81	130.93	135.11	139.37	143.70	20
21	110.70	114.48	118.33	122.26	126.26	130.33	134.48	138.70	143.00	147.37	21
22	114.11	117.93	121.81	125.78	129.81	133.93	138.11	142.37	146.70	151.11	22
23	117.59	121.44	125.37	129.37	133.44	137.59	141.81	146.11	150.48	154.93	23
24	121.15	125.04	129.00	133.04	137.15	141.33	145.59	149.93	154.33	158.81	24
25	124.78	128.70	132.70	136.78	140.93	145.15	149.44	153.81	158.26	162.78	25
26	128.48	132.44	136.48	140.59	144.78	149.04	153.37	157.78	162.26	166.81	26
27	132.26	136.26	140.33	144.48	148.70	153.00	157.37	161.81	166.33	170.93	27
28	136.11	140.15	144.26	148.44	152.70	157.04	161.44	165.93	170.48	175.11	28
29	140.04	144.11	148.26	152.48	156.78	161.15	165.59	170.11	174.70	179.37	29
30	144.04	148.15	152.33	156.59	160.93	165.33	169.81	174.37	179.00	183.70	30
31	148.11	152.26	156.48	160.78	165.15	169.59	174.11	178.70	183.37	188.11	31
32	152.26	156.44	160.70	165.04	169.44	173.93	178.48	183.11	187.81	192.59	32
33	156.48	160.70	165.00	169.37	173.81	178.33	182.93	187.59	192.35	197.15	33
34	160.78	165.04	169.37	173.78	178.26	182.81	187.44	192.15	196.93	201.78	34
35	165.15	169.44	173.81	178.26	182.78	187.37	192.04	196.78	201.59	206.48	35
36	169.59	173.93	178.33	182.81	187.37	192.00	196.70	201.48	206.33	211.26	36
37	174.11	178.48	182.93	187.44	192.04	196.70	201.44	206.26	211.15	216.11	37
38	178.70	183.11	187.59	192.15	196.78	201.48	206.26	211.11	216.04	221.04	38
39	183.37	187.81	192.33	196.93	201.59	206.33	211.15	216.04	221.00	226.04	39
40	188.11	192.59	197.15	201.78	206.48	211.26	216.11	221.04	226.04	231.11	40
41	192.93	197.44	202.04	206.70	211.44	216.26	221.15	226.11	231.15	236.26	41
42	197.81	202.37	207.00	211.70	216.48	221.33	226.26	231.26	236.33	241.48	42
43	202.78	207.37	212.04	216.78	221.59	226.48	231.44	236.48	241.59	246.78	43
44	207.81	212.44	217.15	221.93	226.78	231.70	236.70	241.78	246.93	252.15	44
45	212.93	217.59	222.33	227.15	232.04	237.00	242.04	247.15	252.33	257.59	45
46	218.11	222.81	227.59	232.44	237.37	242.37	247.44	252.59	257.81	263.11	46
47	223.37	228.11	232.93	237.81	242.78	247.81	252.93	258.11	263.37	268.70	47
48	228.70	233.48	238.33	243.26	248.26	253.33	258.48	263.70	269.00	274.37	48
49	234.11	238.93	243.81	248.78	253.81	258.93	264.11	269.37	274.70	280.11	49
50	239.59	244.44	249.37	254.37	259.44	264.59	269.81	275.11	280.48	285.93	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XX.—BASE 36—SLOPES 3 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	89.59	93.33	97.15	101.04	105.00	109.04	113.15	117.33	121.59	125.93	0
1	91.81	95.59	99.44	103.37	107.37	111.44	115.59	119.81	124.11	128.48	1
2	94.11	97.93	101.81	105.78	109.81	113.93	118.11	122.37	126.70	131.11	2
3	96.48	100.33	104.26	108.26	112.35	116.48	120.70	125.00	129.37	133.81	3
4	98.93	102.81	106.78	110.81	114.93	119.11	123.37	127.70	132.11	136.59	4
5	101.44	105.37	109.37	113.44	117.59	121.81	126.11	130.48	134.93	139.44	5
6	104.04	108.00	112.04	116.15	120.33	124.59	128.93	133.33	137.81	142.37	6
7	106.70	110.70	114.78	118.93	123.15	127.44	131.81	136.26	140.78	145.37	7
8	109.44	113.48	117.59	121.78	126.04	130.37	134.78	139.26	143.81	148.44	8
9	112.26	116.33	120.48	124.70	129.00	133.37	137.81	142.33	146.93	151.59	9
10	115.15	119.26	123.44	127.70	132.04	136.44	140.93	145.48	150.11	154.81	10
11	118.11	122.26	126.48	130.78	135.15	139.59	144.11	148.70	153.37	158.11	11
12	121.15	125.33	129.59	133.93	138.33	142.81	147.37	152.00	156.70	161.48	12
13	124.26	128.48	132.78	137.15	141.59	146.11	150.70	155.37	160.11	164.93	13
14	127.44	131.70	136.04	140.44	144.93	149.48	154.11	158.81	163.59	168.44	14
15	130.70	135.00	139.37	143.81	148.33	152.93	157.59	162.33	167.15	172.04	15
16	134.04	138.37	142.78	147.26	151.81	156.44	161.15	165.93	170.78	175.70	16
17	137.44	141.81	146.26	150.78	155.37	160.04	164.78	169.59	174.48	179.44	17
18	140.93	145.33	149.81	154.37	159.00	163.70	168.48	173.33	178.26	183.26	18
19	144.48	148.93	153.44	158.04	162.70	167.44	172.26	177.15	182.11	187.15	19
20	148.11	152.59	157.15	161.78	166.48	171.26	176.11	181.04	186.04	191.11	20
21	151.81	156.33	160.93	165.59	170.33	175.15	180.04	185.00	190.04	195.15	21
22	155.59	160.15	164.78	169.48	174.26	179.11	184.04	189.04	194.11	199.26	22
23	159.44	164.04	168.70	173.44	178.26	183.15	188.11	193.15	198.26	203.44	23
24	163.37	168.00	172.70	177.48	182.33	187.26	192.26	197.33	202.48	207.70	24
25	167.37	172.04	176.78	181.59	186.48	191.44	196.48	201.59	206.78	212.04	25
26	171.44	176.15	180.93	185.78	190.70	195.70	200.78	205.93	211.15	216.44	26
27	175.59	180.33	185.15	190.04	195.00	200.04	205.15	210.33	215.59	220.93	27
28	179.81	184.59	189.44	194.37	199.37	204.44	209.59	214.81	220.11	225.48	28
29	184.11	188.93	193.81	198.78	203.81	208.93	214.11	219.37	224.70	230.11	29
30	188.48	193.33	198.26	203.26	208.33	213.48	218.70	224.00	229.37	234.81	30
31	192.93	197.81	202.78	207.81	212.93	218.11	223.37	228.70	234.11	239.59	31
32	197.44	202.37	207.37	212.44	217.59	222.81	228.11	233.48	238.93	244.44	32
33	202.04	207.00	212.04	217.15	222.36	227.59	232.93	238.33	243.81	249.37	33
34	206.70	211.70	216.78	221.93	227.15	232.44	237.81	243.26	248.78	254.37	34
35	211.44	216.48	221.59	226.78	232.04	237.37	242.78	248.26	253.81	259.44	35
36	216.26	221.33	226.48	231.70	237.00	242.37	247.81	253.33	258.93	264.59	36
37	221.15	226.26	231.44	236.70	242.04	247.44	252.93	258.48	264.11	269.81	37
38	226.11	231.26	236.48	241.78	247.15	252.59	258.11	263.70	269.37	275.11	38
39	231.15	236.33	241.59	246.93	252.33	257.81	263.37	269.00	274.70	280.48	39
40	236.26	241.48	246.78	252.15	257.59	263.11	268.70	274.37	280.11	285.93	40
41	241.44	246.70	252.04	257.44	262.93	268.48	274.11	279.81	285.59	291.44	41
42	246.70	252.00	257.37	262.81	268.33	273.93	279.59	285.33	291.15	297.04	42
43	252.04	257.37	262.78	268.26	273.81	279.44	285.15	290.93	296.78	302.70	43
44	257.44	262.81	268.26	273.78	279.37	285.04	290.78	296.59	302.48	308.44	44
45	262.93	268.33	273.81	279.37	285.00	290.70	296.48	302.33	308.26	314.26	45
46	268.48	273.93	279.44	285.04	290.70	296.44	302.26	308.15	304.11	320.15	46
47	274.11	279.59	285.15	290.78	296.48	302.26	308.11	314.04	320.04	326.11	47
48	279.81	285.33	290.93	296.59	302.33	308.15	314.04	320.00	326.04	332.15	48
49	285.59	291.15	296.78	302.48	308.26	314.11	320.04	326.04	332.11	338.26	49
50	291.44	297.04	302.70	308.44	314.26	320.15	326.11	332.15	338.26	344.44	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XXI.—BASE 40—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.78	1.63	2.56	3.56	4.63	5.78	7.00	8.30	9.67	11.11	0
1	1.59	2.48	3.44	4.48	5.59	6.78	8.04	9.37	10.78	12.26	1
2	2.48	3.41	4.41	5.48	6.63	7.85	9.15	10.52	11.96	13.48	2
3	3.44	4.41	5.44	6.56	7.74	9.00	10.33	11.74	13.22	14.78	3
4	4.48	5.48	6.56	7.70	8.92	10.22	11.59	13.04	14.56	16.15	4
5	5.59	6.63	7.74	8.92	10.18	11.52	12.92	14.41	15.96	17.59	5
6	6.78	7.85	9.00	10.22	11.52	12.89	14.33	15.85	17.44	19.11	6
7	8.04	9.15	10.33	11.59	12.92	14.33	15.81	17.37	19.00	20.70	7
8	9.37	10.52	11.74	13.04	14.41	15.85	17.37	18.96	20.63	22.37	8
9	10.78	11.96	13.22	14.56	15.96	17.44	19.00	20.63	22.33	24.11	9
10	12.26	13.48	14.78	16.15	17.59	19.11	20.70	22.37	24.11	25.92	10
11	13.81	15.07	16.41	17.81	19.30	20.85	22.48	24.18	25.96	27.81	11
12	15.44	16.74	18.11	19.56	21.07	22.67	24.33	26.07	27.89	29.78	12
13	17.15	18.48	19.89	21.37	22.92	24.56	26.26	28.04	29.89	31.81	13
14	18.92	20.30	21.74	23.26	24.85	26.52	28.26	30.07	31.96	33.92	14
15	20.78	22.18	23.67	25.22	26.85	28.56	30.33	32.18	34.11	36.11	15
16	22.70	24.15	25.67	27.26	28.92	30.67	32.48	34.37	36.33	38.37	16
17	24.70	26.18	27.74	29.37	31.07	32.85	34.70	36.63	38.63	40.70	17
18	26.78	28.30	29.89	31.56	33.30	35.11	37.00	38.96	41.00	43.11	18
19	28.92	30.48	32.11	33.81	35.59	37.44	39.37	41.37	43.44	45.59	19
20	31.15	32.74	34.41	36.15	37.96	39.85	41.81	43.85	45.96	48.15	20
21	33.44	35.07	36.78	38.56	40.41	42.33	44.33	46.41	48.56	50.78	21
22	35.81	37.48	39.22	41.04	42.92	44.89	46.92	49.04	51.22	53.48	22
23	38.26	39.96	41.74	43.59	45.52	47.52	49.59	51.74	53.96	56.26	23
24	40.78	42.52	44.33	46.22	48.18	50.22	52.33	54.52	56.78	59.11	24
25	43.37	45.15	47.00	48.92	50.92	53.00	55.15	57.37	59.67	62.04	25
26	46.04	47.85	49.74	51.70	53.74	55.85	58.04	60.30	62.63	65.04	26
27	48.78	50.63	52.56	54.56	56.63	58.78	61.00	63.30	65.67	68.11	27
28	51.59	53.48	55.44	57.48	59.59	61.78	64.04	66.37	68.78	71.26	28
29	54.48	56.41	58.41	60.48	62.63	64.85	67.15	69.52	71.96	74.48	29
30	57.44	59.41	61.44	63.56	65.74	68.00	70.33	72.74	75.22	77.78	30
31	60.48	62.48	64.56	66.70	68.92	71.22	73.59	76.04	78.56	81.15	31
32	63.59	65.63	67.74	69.92	72.18	74.52	76.92	79.41	81.96	84.59	32
33	66.78	68.85	71.00	73.22	75.52	77.89	80.33	82.85	85.44	88.11	33
34	70.04	72.15	74.33	76.59	78.92	81.33	83.81	86.37	89.00	91.70	34
35	73.37	75.52	77.74	80.04	82.41	84.85	87.37	89.96	92.63	95.37	35
36	76.78	78.96	81.22	83.56	85.96	88.44	91.00	93.63	96.33	99.11	36
37	80.26	82.48	84.78	87.15	89.59	92.11	94.70	97.37	100.11	102.92	37
38	83.81	86.07	88.41	90.81	93.30	95.85	98.48	101.18	103.96	106.81	38
39	87.44	89.74	92.11	94.56	97.07	99.67	102.33	105.07	107.89	110.78	39
40	91.15	93.48	95.89	98.37	100.92	103.56	106.26	109.04	111.89	114.81	40
41	94.92	97.30	99.74	102.26	104.85	107.52	110.26	113.07	115.96	118.92	41
42	98.78	101.18	103.67	106.22	108.85	111.56	114.33	117.18	120.11	123.11	42
43	102.70	105.15	107.67	110.26	112.92	115.67	118.48	121.37	124.33	127.37	43
44	106.70	109.18	111.74	114.37	117.07	119.85	122.70	125.63	128.63	131.70	44
45	110.78	113.30	115.89	118.56	121.30	124.11	127.00	129.96	133.00	136.11	45
46	114.92	117.48	120.11	122.81	125.59	128.44	131.37	134.37	137.44	140.59	46
47	119.15	121.74	124.41	127.15	129.96	132.85	135.81	138.85	141.96	145.15	47
48	123.44	126.07	128.78	131.56	134.41	137.33	140.33	143.41	146.56	149.78	48
49	127.81	130.48	133.22	136.04	138.92	141.89	144.92	148.04	151.22	154.48	49
50	132.26	134.96	137.74	140.59	143.52	146.52	149.59	152.74	155.96	159.26	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XXI.—BASE 40—SLOPES 3 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	12.63	14.22	15.89	17.63	19.44	21.33	23.30	25.33	27.44	29.63	0
1	13.81	15.44	17.15	18.92	20.78	22.70	24.70	26.78	28.92	31.15	1
2	15.07	16.74	18.48	20.30	22.18	24.15	26.18	28.30	30.48	32.74	2
3	16.41	18.11	19.89	21.74	23.67	25.67	27.74	29.89	32.11	34.41	3
4	17.81	19.56	21.37	23.26	25.22	27.26	29.37	31.56	33.81	36.15	4
5	19.30	21.07	22.92	24.85	26.85	28.92	31.07	33.30	35.59	37.96	5
6	20.85	22.67	24.56	26.52	28.56	30.67	32.85	35.11	37.44	39.85	6
7	22.48	24.33	26.26	28.26	30.33	32.48	34.70	37.00	39.37	41.81	7
8	24.18	26.07	28.04	30.07	32.18	34.37	36.63	38.96	41.37	43.85	8
9	25.96	27.89	29.89	31.96	34.11	36.33	38.63	41.00	43.44	45.96	9
10	27.81	29.78	31.81	33.92	36.11	38.37	40.70	43.11	45.59	48.15	10
11	29.74	31.74	33.81	35.96	38.18	40.48	42.85	45.30	47.81	50.41	11
12	31.74	33.78	35.89	38.07	40.33	42.67	45.07	47.56	50.11	52.74	12
13	33.81	35.89	38.04	40.26	42.56	44.92	47.37	49.89	52.48	55.15	13
14	35.96	38.07	40.26	42.52	44.85	47.26	49.74	52.30	54.92	57.63	14
15	38.18	40.33	42.56	44.85	47.22	49.67	52.18	54.78	57.44	60.18	15
16	40.48	42.67	44.92	47.26	49.67	52.15	54.70	57.33	60.04	62.81	16
17	42.85	45.07	47.37	49.74	52.18	54.70	57.30	59.96	62.70	65.52	17
18	45.30	47.56	49.89	52.30	54.78	57.33	59.96	62.67	65.44	68.30	18
19	47.81	50.11	52.48	54.92	57.44	60.04	62.70	65.44	68.26	71.15	19
20	50.41	52.74	55.15	57.63	60.18	62.81	65.52	68.30	71.15	74.07	20
21	53.07	55.44	57.89	60.41	63.00	65.67	68.41	71.22	74 11	77.07	21
22	55.81	58.22	60.70	63.26	65.89	68.59	71.37	74.22	77.15	80.15	22
23	58.63	61.07	63.59	66.18	68.85	71.59	74.41	77.30	80.26	83.30	23
24	61.52	64.00	66.56	69.18	71.89	74.67	77.52	80.44	83.44	86.52	24
25	64.48	67.00	69.59	72.26	75.00	77.81	80.70	83.67	86.70	89.81	25
26	67.52	70.07	72.70	75.41	78.18	81.04	83.96	86.96	90.04	93.18	26
27	70.63	73.22	75.89	78.63	81.44	84.33	87.30	90.33	93.44	96.63	27
28	73.81	76.44	79.15	81.92	84.78	87.70	90.70	93.78	96.92	100.15	28
29	77.07	79.74	82.48	85.30	88.18	91.15	94.18	97.30	100.48	103.74	29
30	80.41	83.11	85.89	88.74	91.67	94.67	97.74	100.89	104.11	107.41	30
31	83.81	86.56	89.37	92.26	95.22	98.26	101.37	104.56	107.81	111.15	31
32	87.30	90.07	92.92	95.85	98.85	101.92	105.07	108.30	111.59	114.96	32
33	90.85	93.67	96.56	99.52	102.56	105.67	108.85	112.11	115.44	118.85	33
34	94.48	97.33	100.26	103.26	106.33	109.48	112.70	116.00	119.37	122.81	34
35	98.18	101.07	104.04	107.07	110.18	113.37	116.63	119.96	123.37	126.85	35
36	101.96	104.89	107.89	110.96	114.11	117.33	120.63	124.00	127.44	130.96	36
37	105.81	108.78	111.81	114.92	118.11	121.37	124.70	128.11	131.59	135.15	37
38	109.74	112.74	115.81	118.96	122.18	125.48	128.85	132.30	135.81	139.41	38
39	113.74	116.78	119.89	123.07	126.33	129.67	133.07	136.56	140.11	143.74	39
40	117.81	120.89	124.04	127.26	130.56	133.92	137.37	140.89	144.48	148.15	40
41	121.96	125.07	128.26	131.52	134.85	138.26	141.74	145.30	148.92	152.63	41
42	126.18	129.33	132.56	135.85	139.22	142.67	146.18	149.78	153.44	157.18	42
43	130.48	133.67	136.92	140.26	143.67	147.15	150.70	154.33	158.04	161.81	43
44	134.85	138.07	141.37	144.74	148.18	151.70	155.30	158.96	162.70	166.52	44
45	139.30	142.56	145.89	149.30	152.78	156.33	159.96	163.67	167.44	171.30	45
46	143.81	147.11	150.48	153.92	157.44	161.04	164.70	168.44	172.26	176.15	46
47	148.41	151.74	155.15	158.63	162.18	165.81	169.52	173.30	177.15	181.07	47
48	153.07	156.44	159.89	163.41	167.00	170.67	174.41	178.22	182.11	186.07	48
49	157.81	161.22	164.70	168.26	171.89	175.59	179.37	183.22	187.15	191.15	49
50	162.63	166.07	169.59	173.18	176.85	180.59	184.41	188.30	192.26	196.30	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XXI.—BASE 40—SLOPES 3 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	31.89	34.22	36.63	39.11	41.67	44.30	47.00	49.78	52.63	55.56	0
1	33.44	35.81	38.26	40.78	43.37	46.04	48.78	51.59	54.48	57.44	1
2	35.07	37.48	39.96	42.52	45.15	47.85	50.63	53.48	56.41	59.41	2
3	36.78	39.22	41.74	44.33	47.00	49.74	52.56	55.44	58.41	61.44	3
4	38.56	41.04	43.59	46.22	48.92	51.70	54.56	57.48	60.48	63.56	4
5	40.41	42.92	45.52	48.18	50.92	53.74	56.63	59.59	62.63	65.74	5
6	42.33	44.89	47.52	50.22	53.00	55.85	58.78	61.78	64.85	68.00	6
7	44.33	46.92	49.59	52.33	55.15	58.04	61.00	64.04	67.15	70.33	7
8	46.41	49.04	51.74	54.52	57.37	60.30	63.30	66.37	69.52	72.74	8
9	48.56	51.22	53.96	56.78	59.67	62.63	65.67	68.78	71.96	75.22	9
10	50.78	53.48	56.26	59.11	62.04	65.04	68.11	71.26	74.48	77.78	10
11	53.07	55.81	58.63	61.52	64.48	67.52	70.63	73.81	77.07	80.41	11
12	55.44	58.22	61.07	64.00	67.00	70.07	73.22	76.44	79.74	83.11	12
13	57.89	60.70	63.59	66.56	69.59	72.70	75.89	79.15	82.48	85.89	13
14	60.41	63.26	66.18	69.18	72.26	75.41	78.63	81.92	85.30	88.74	14
15	63.00	65.89	68.85	71.89	75.00	78.18	81.44	84.78	88.18	91.67	15
16	65.67	68.59	71.59	74.67	77.81	81.04	84.33	87.70	91.15	94.67	16
17	68.41	71.37	74.41	77.52	80.70	83.96	87.30	90.70	94.18	97.74	17
18	71.22	74.22	77.30	80.44	83.67	86.96	90.33	93.78	97.30	100.89	18
19	74.11	77.15	80.26	83.44	86.70	90.04	93.44	96.92	100.48	104.11	19
20	77.07	80.15	83.30	86.52	89.81	93.18	96.63	100.15	103.74	107.41	20
21	80.11	83.22	86.41	89.67	93.00	96.41	99.89	103.44	107.07	110.78	21
22	83.22	86.37	89.59	92.89	96.26	99.70	103.22	106.81	110.48	114.22	22
23	86.41	89.59	92.85	96.18	99.59	103.07	106.63	110.26	113.96	117.74	23
24	89.67	92.89	96.18	99.56	103.00	106.52	110.11	113.78	117.52	121.33	24
25	93.00	96.26	99.59	103.00	106.48	110.04	113.67	117.37	121.15	125.00	25
26	96.41	99.70	103.07	106.52	110.04	113.63	117.30	121.04	124.85	128.74	26
27	99.89	103.22	106.63	110.11	113.67	117.30	121.00	124.78	128.63	132.56	27
28	103.44	106.81	110.26	113.78	117.37	121.04	124.78	128.59	132.48	136.44	28
29	107.07	110.48	113.96	117.52	121.15	124.85	128.63	132.48	136.41	140.41	29
30	110.78	114.22	117.74	121.33	125.00	128.74	132.56	136.44	140.41	144.44	30
31	114.56	118.04	121.59	125.22	128.92	132.70	136.56	140.48	144.48	148.56	31
32	118.41	121.92	125.52	129.18	132.92	136.74	140.63	144.59	148.63	152.74	32
33	122.33	125.89	129.52	133.22	137.00	140.85	144.78	148.78	152.85	157.00	33
34	126.33	129.92	133.59	137.33	141.15	145.04	149.00	153.04	157.15	161.33	34
35	130.41	134.04	137.74	141.52	145.37	149.30	153.30	157.37	161.52	165.74	35
36	134.56	138.22	141.96	145.78	149.67	153.63	157.67	161.78	165.96	170.22	36
37	138.78	142.48	146.26	150.11	154.04	158.04	162.11	166.26	170.48	174.78	37
38	143.07	146.81	150.63	154.52	158.48	162.52	166.63	170.81	175.07	179.41	38
39	147.44	151.22	155.07	159.00	163.00	167.07	171.22	175.44	179.74	184.11	39
40	151.89	155.70	159.59	163.56	167.59	171.70	175.89	180.15	184.48	188.89	40
41	156.41	160.26	164.18	168.18	172.26	176.41	180.63	184.92	189.30	193.74	41
42	161.00	164.89	168.85	172.89	177.00	181.18	185.44	189.78	194.18	198.67	42
43	165.67	169.59	173.59	177.67	181.81	186.04	190.33	194.70	199.15	203.67	43
44	170.41	174.37	178.41	182.52	186.70	190.96	195.30	199.70	204.18	208.74	44
45	175.22	179.22	183.30	187.44	191.67	195.96	200.33	204.78	209.30	213.89	45
46	180.11	184.15	188.26	192.44	196.70	201.04	205.44	209.92	214.48	219.11	46
47	185.07	189.15	193.30	197.52	201.81	206.18	210.63	215.15	219.74	224.41	47
48	190.11	194.22	198.41	202.67	207.00	211.41	215.89	220.44	225.07	229.78	48
49	195.22	199.37	203.59	207.89	212.26	216.70	221.22	225.81	230.48	235.22	49
50	200.41	204.59	208.85	213.18	217.59	222.07	226.63	231.26	235.96	240.74	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XXI.—BASE 40—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	58.56	61.63	64.78	68.00	71.30	74.67	78.11	81.63	85.22	88.89	0
1	60.48	63.59	66.78	70.04	73.37	76.78	80.26	83.81	87.44	91.15	1
2	62.48	65.63	68.85	72.15	75.52	78.96	82.48	86.07	89.74	93.48	2
3	64.56	67.74	71.00	74.33	77.74	81.22	84.78	88.41	92.11	95.89	3
4	66.70	69.92	73.22	76.59	80.04	83.56	87.15	90.81	94.56	98.37	4
5	68.92	72.18	75.52	78.92	82.41	85.96	89.59	93.30	97.07	100.92	5
6	71.22	74.52	77.89	81.33	84.85	88.44	92.11	95.85	99.67	103.56	6
7	73.59	76.92	80.33	83.81	87.37	91.00	94.70	98.48	102.33	106.26	7
8	76.04	79.41	82.85	86.37	89.96	93.63	97.37	101.18	105.07	109.04	8
9	78.56	81.96	85.44	89.00	92.63	96.33	100.11	103.96	107.89	111.89	9
10	81.15	84.59	88.11	91.70	95.37	99.11	102.92	106.81	110.78	114.81	10
11	83.81	87.30	90.85	94.48	98.18	101.96	105.81	109.74	113.74	117.81	11
12	86.56	90.07	93.67	97.33	101.07	104.89	108.78	112.74	116.78	120.89	12
13	89.37	92.92	96.56	100.26	104.04	107.89	111.81	115.81	119.89	124.04	13
14	92.26	95.85	99.52	103.26	107.07	110.96	114.92	118.96	123.07	127.26	14
15	95.22	98.85	102.56	106.33	110.18	114.11	118.11	122.18	126.33	130.56	15
16	98.26	101.92	105.67	109.48	113.37	117.33	121.37	125.48	129.67	133.92	16
17	101.37	105.07	108.85	112.70	116.63	120.63	124.70	128.85	133.07	137.37	17
18	104.56	108.30	112.11	116.00	119.96	124.00	128.11	132.30	136.56	140.89	18
19	107.81	111.59	115.44	119.37	123.37	127.44	131.59	135.81	140.11	144.48	19
20	111.15	114.96	118.85	122.81	126.85	130.96	135.15	139.41	143.74	148.15	20
21	114.56	118.41	122.33	126.33	130.41	134.56	138.78	143.07	147.44	151.89	21
22	118.04	121.92	125.89	129.92	134.04	138.22	142.48	146.81	151.22	155.70	22
23	121.59	125.52	129.52	133.59	137.74	141.96	146.26	150.63	155.07	159.59	23
24	125.22	129.18	133.22	137.33	141.52	145.78	150.11	154.52	159.00	163.56	24
25	128.92	132.92	137.00	141.15	145.37	149.67	154.04	158.48	163.00	167.59	25
26	132.70	136.74	140.85	145.04	149.30	153.63	158.04	162.52	167.07	171.70	26
27	136.56	140.63	144.78	149.00	153.30	157.67	162.11	166.63	171.22	175.89	27
28	140.48	144.59	148.78	153.04	157.37	161.78	166.26	170.81	175.44	180.15	28
29	144.48	148.63	152.85	157.15	161.52	165.96	170.48	175.07	179.74	184.48	29
30	148.56	152.74	157.00	161.33	165.74	170.22	174.78	179.41	184.11	188.89	30
31	152.70	156.92	161.22	165.59	170.04	174.56	179.15	183.81	188.56	193.37	31
32	156.92	161.18	165.52	169.92	174.41	178.96	183.59	188.30	193.07	197.92	32
33	161.22	165.52	169.89	174.33	178.85	183.44	188.11	192.85	197.67	202.56	33
34	165.59	169.92	174.33	178.81	183.37	188.00	192.70	197.48	202.33	207.26	34
35	170.04	174.41	178.85	183.37	187.96	192.63	197.37	202.18	207.07	212.04	35
36	174.56	178.96	183.44	188.00	192.63	197.33	202.11	206.96	211.89	216.89	36
37	179.15	183.59	188.11	192.70	197.37	202.11	206.92	211.81	216.78	221.81	37
38	183.81	188.30	192.85	197.48	202.18	206.96	211.81	216.74	221.74	226.81	38
39	188.56	193.07	197.67	202.33	207.07	211.89	216.78	221.74	226.78	231.89	39
40	193.37	197.92	202.56	207.26	212.04	216.89	221.81	226.81	231.89	237.04	40
41	198.26	202.85	207.52	212.26	217.07	221.96	226.92	231.96	237.07	242.26	41
42	203.22	207.85	212.56	217.33	222.18	227.11	232.11	237.18	242.33	247.56	42
43	208.26	212.92	217.67	222.48	227.37	232.33	237.37	242.48	247.67	252.92	43
44	213.37	218.07	222.85	227.70	232.63	237.63	242.70	247.85	253.07	258.37	44
45	218.56	223.30	228.11	233.00	237.96	243.00	248.11	253.30	258.56	263.89	45
46	223.81	228.59	233.44	238.37	243.37	248.44	253.59	258.81	264.11	269.48	46
47	229.15	233.96	238.85	243.81	248.85	253.96	259.15	264.41	269.74	275.15	47
48	234.56	239.41	244.33	249.33	254.41	259.56	264.78	270.07	275.44	280.89	48
49	240.04	244.92	249.89	254.92	260.04	265.22	270.48	275.81	281.22	286.70	49
50	245.59	250.52	255.52	260.59	265.74	270.96	276.26	281.63	287.07	292.59	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XXI.—BASE 40—SLOPES 3 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	92.63	96.44	100.33	104.30	108.33	112.44	116.63	120.89	125.22	129.63	0
1	94.92	98.78	102.70	106.70	110.78	114.92	119.15	123.44	127.81	132.26	1
2	97.30	101.18	105.15	109.18	113.30	117.48	121.74	126.07	130.48	134.96	2
3	99.74	103.67	107.67	111.74	115.89	120.11	124.41	128.78	133.22	137.74	3
4	102.26	106.22	110.26	114.37	118.56	122.81	127.15	131.56	136.04	140.59	4
5	104.85	108.85	112.92	117.07	121.30	125.59	129.96	134.41	138.92	143.52	5
6	107.52	111.56	115.67	119.85	124.11	128.44	132.85	137.33	141.89	146.52	6
7	110.26	114.33	118.48	122.70	127.00	131.37	135.81	140.33	144.92	149.59	7
8	113.07	117.18	121.37	125.63	129.96	134.37	138.85	143.41	148.04	152.74	8
9	115.96	120.11	124.33	128.63	133.00	137.44	141.96	146.56	151.22	155.96	9
10	118.92	123.11	127.37	131.70	136.11	140.59	145.15	149.78	154.48	159.26	10
11	121.96	126.18	130.48	134.85	139.30	143.81	148.41	153.07	157.81	162.63	11
12	125.07	129.33	133.67	138.07	142.56	147.11	151.74	156.44	161.22	166.07	12
13	128.26	132.56	136.92	141.37	145.89	150.48	155.15	159.89	164.70	169.59	13
14	131.52	135.85	140.26	144.74	149.30	153.92	158.63	163.41	168.26	173.18	14
15	134.85	139.22	143.67	148.18	152.78	157.44	162.18	167.00	171.89	176.85	15
16	138.26	142.67	147.15	151.70	156.33	161.04	165.81	170.67	175.59	180.59	16
17	141.74	146.18	150.70	155.30	159.96	164.70	169.52	174.41	179.37	184.41	17
18	145.30	149.78	154.33	158.96	163.67	168.44	173.30	178.22	183.22	188.30	18
19	148.92	153.44	158.04	162.70	167.44	172.26	177.15	182.11	187.15	192.26	19
20	152.63	157.18	161.81	166.52	171.30	176.15	181.07	186.07	191.15	196.30	20
21	156.41	161.00	165.67	170.41	175.22	180.11	185.07	190.11	195.22	200.41	21
22	160.26	164.89	169.59	174.37	179.22	184.15	189.15	194.22	199.37	204.59	22
23	164.18	168.85	173.59	178.41	183.30	188.26	193.30	198.41	203.59	208.85	23
24	168.18	172.89	177.67	182.52	187.44	192.44	197.52	202.67	207.89	213.18	24
25	172.26	177.00	181.81	186.70	191.67	196.70	201.81	207.00	212.26	217.59	25
26	176.41	181.18	186.04	190.96	195.96	201.04	206.18	211.41	216.70	222.07	26
27	180.63	185.44	190.33	195.30	200.33	205.44	210.63	215.89	221.22	226.63	27
28	184.92	189.78	194.70	199.70	204.78	209.92	215.15	220.44	225.81	231.26	28
29	189.30	194.18	199.15	204.18	209.30	214.48	219.74	225.07	230.48	235.96	29
30	193.74	198.67	203.67	208.74	213.89	219.11	224.41	229.78	235.22	240.74	30
31	198.26	203.22	208.26	213.37	218.56	223.81	229.15	234.56	240.04	245.59	31
32	202.85	207.85	212.92	218.07	223.30	228.59	233.96	239.41	244.92	250.52	32
33	207.52	212.56	217.67	222.85	228.11	233.44	238.85	244.33	249.89	255.52	33
34	212.26	217.33	222.48	227.70	233.00	238.37	243.81	249.33	254.92	260.59	34
35	217.07	222.18	227.37	232.63	237.96	243.37	248.85	254.41	260.04	265.74	35
36	221.96	227.11	232.33	237.63	243.00	248.44	253.96	259.56	265.22	270.96	36
37	226.92	232.11	237.37	242.70	248.11	253.59	259.15	264.78	270.48	276.26	37
38	231.96	237.18	242.48	247.85	253.30	258.81	264.41	270.07	275.81	281.63	38
39	237.07	242.33	247.67	253.07	258.56	264.11	269.74	275.44	281.22	287.07	39
40	242.26	247.56	252.92	258.37	263.89	269.48	275.15	280.89	286.70	292.59	40
41	247.52	252.85	258.26	263.74	269.30	274.92	280.63	286.41	292.26	298.18	41
42	252.85	258.22	263.67	269.18	274.78	280.44	286.18	292.00	297.89	303.85	42
43	258.26	263.67	269.15	274.70	280.33	286.04	291.81	297.67	303.59	309.59	43
44	263.74	269.18	274.70	280.30	285.96	291.70	297.52	303.41	309.37	315.41	44
45	269.30	274.78	280.33	285.96	291.67	297.44	303.30	309.22	315.22	321.30	45
46	274.92	280.44	286.04	291.70	297.44	303.26	309.15	315.11	321.15	327.26	46
47	280.63	286.18	291.81	297.52	303.30	309.15	315.07	321.07	327.15	333.30	47
48	286.41	292.00	297.67	303.41	309.22	315.11	321.07	327.11	333.22	339.41	48
49	292.26	297.89	303.59	309.37	315.22	321.15	327.15	333.22	339.37	345.59	49
50	298.18	303.85	309.59	315.41	321.30	327.26	333.30	339.41	345.59	351.85	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XXII.—BASE 50—SLOPES 3 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.95	2.00	3.11	4.30	5.56	6.89	8.30	9.78	11.33	12.96	0
1	1.96	3.04	4.19	5.41	6.70	8.07	9.52	11.04	12.63	14.30	1
2	3.04	4.15	5.33	6.59	7.93	9.33	10.81	12.37	14.00	15.70	2
3	4.19	5.33	6.56	7.85	9.22	10.67	12.19	13.78	15.44	17.19	3
4	5.41	6.59	7.85	9.19	10.59	12.07	13.63	15.26	16.96	18.74	4
5	6.70	7.93	9.22	10.59	12.04	13.56	15.15	16.81	18.56	20.37	5
6	8.07	9.33	10.67	12.07	13.56	15.11	16.74	18.44	20.22	22.07	6
7	9.52	10.81	12.19	13.63	15.15	16.74	18.41	20.15	21.96	23.85	7
8	11.04	12.37	13.78	15.26	16.81	18.44	20.15	21.93	23.78	25.70	8
9	12.63	14.00	15.44	16.96	18 56	20.22	21.96	23.78	25.67	27.63	9
10	14.30	15.70	17.19	18.74	20.37	22.07	23.85	25.70	27.63	29.63	10
11	16.04	17.48	19.00	20.59	22.26	24.00	25.81	27.70	29.67	31.70	11
12	17.85	19.33	20.89	22.52	24.22	26.00	27.85	29.78	31.78	33.85	13
13	19.74	21.26	22.85	24.52	26.26	28.07	29.96	31.93	33.96	36.07	14
14	21.70	23.26	24.89	26.59	28.37	30.22	32.15	34.15	36.22	38.37	25
15	23.74	25.33	27.00	28.74	30.56	32.44	34.41	36.44	38.56	40.74	11
16	25.85	27.48	29.19	30.96	32.81	34.74	36.74	38.81	40.96	43.19	16
17	28.04	29.70	31.44	33.26	35.15	37.11	39.15	41.26	43.44	45.70	17
18	30.30	32.00	33.78	35.63	37.56	39.56	41.63	43.78	46.00	48.30	18
19	32.63	34.37	36.19	38.07	40.04	42.07	44.19	46.37	48.63	50.96	19
20	35.04	36.81	38.67	40.59	42.59	44.67	46.81	49.04	51.33	53.70	20
21	37.52	39.33	41.22	43.19	45.22	47.33	49.52	51.78	54.11	56.52	21
22	40.07	41.93	43.85	45.85	47.93	50.07	52.30	54.59	56.96	59.41	22
23	42.70	44.59	46.56	48.59	50.70	52.89	55.15	57.48	59.89	62.37	23
24	45.41	47.33	49.33	51.41	53.56	55.78	58.07	60.44	62.89	65.41	24
25	48.19	50.15	52.19	54.30	56.48	58.74	61.07	63.48	65.96	68.52	25
26	51.04	53.04	55.11	57.26	59.48	61.78	64.15	66.59	69.11	71.70	26
27	53.96	56.00	58.11	60.30	62.56	64.89	67.30	69.78	72.33	74.96	27
28	56.96	59.04	61.19	63.41	65.70	68.07	70.52	73.04	75.63	78.30	28
29	60.04	62.15	64.33	66.59	68.93	71.33	73.81	76.37	79.00	81.70	29
30	63.19	65.33	67.56	69.85	72.22	74.67	77.19	79.78	82.44	85.19	30
31	66.41	68.59	70.85	73.19	75.59	78.07	80.63	83.26	85.96	88.74	31
32	69.70	71.93	74.22	76.59	79.04	81.56	84.15	86.81	89.56	92.37	32
33	73.07	75.33	77.67	80.07	82.56	85.11	87.74	90.44	93.22	96.07	33
34	76.52	78.81	81.19	83.63	86.15	88.74	91.41	94.15	96.96	99.85	34
35	80.04	82.37	84.78	87.26	89.81	92.44	95.15	97.93	100.78	103.70	35
36	83.63	86.00	88.44	90.96	93.56	96.22	98.96	101.78	104.67	107.63	36
37	87.30	89.70	92.19	94.74	97.37	100.07	102.85	105.70	108.63	111.63	37
38	91.04	93.48	96.00	98.59	101.26	104.00	106.81	109.70	112.67	115.70	38
39	94.85	97.33	99.89	102.52	105.22	108.00	110.85	113.78	116.78	119.85	39
40	98.74	101.26	103.85	106.52	109.26	112.07	114.96	117.93	120.96	124.07	40
41	102.70	105.26	107.89	110.59	113.37	116.22	119.15	122.15	125.22	128.37	41
42	106.74	109.33	112.00	114.74	117.56	120.44	123.41	126.44	129.56	132.74	42
43	110.85	113.48	116.19	118.96	121.81	124.74	127.74	130.81	133.96	137.19	43
44	115.04	117.70	120.44	123.26	126.15	129.11	132.15	135.26	138.44	141.70	44
45	119.30	122.00	124.78	127.63	130.56	133.56	136.63	139.78	143.00	146.30	45
46	123.63	126.37	129.19	132.07	135.04	138.07	141.19	144.37	147.63	150.96	46
47	128.04	130.81	133.67	136.59	139.59	142.67	145.81	149.04	152.33	155.70	47
48	132.52	135.33	138.22	141.19	144.22	147.33	150.52	153.78	157.11	160.52	48
49	137.07	139.93	142.85	145.85	148.93	152.07	155.30	158.59	161.96	165.41	59
50	141.70	144.59	147.56	150.59	153.70	156.89	160.15	163.48	166.89	170.37	40
	1	2	3	4	5	6	7	8	9	10	

TABLE XXII.—BASE 50—SLOPES 3 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	14.67	16.44	18.30	20.22	22.22	24.30	26.44	28.67	30.96	33.33	0
1	16.04	17.85	19.74	21.70	23.74	25.85	28.04	30.30	32.63	35.04	1
2	17.48	19.33	21.26	23.26	25.33	27.48	29.70	32.00	34.37	36.81	2
3	19.00	20.89	22.85	24.89	27.00	29.19	31.44	33.78	36.19	38.67	3
4	20.59	22.52	24.52	26.59	28.74	30.96	33.26	35.63	38.07	40.59	4
5	22.26	24.22	26.26	28.37	30.56	32.81	35.15	37.56	40.04	42.59	5
6	24.00	26.00	28.07	30.22	32.44	34.74	37.11	39.56	42.07	44.67	6
7	25.81	27.85	29.96	32.15	34.41	36.74	39.15	41.63	44.19	46.81	7
8	27.70	29.78	31.93	34.15	36.44	38.81	41.26	43.78	46.37	49.04	8
9	29.67	31.78	33.96	36.22	38.56	40.96	43.44	46.00	48.63	51.33	9
10	31.70	33.85	36.07	38.37	40.74	43.19	45.70	48.30	50.96	53.70	10
11	33.81	36.00	38.26	40.59	43.00	45.48	48.04	50.67	53.37	56.15	11
12	36.00	38.22	40.52	42.89	45.33	47.85	50.44	53.11	55.85	58.67	12
13	38.26	40.52	42.85	45.26	47.74	50.30	52.93	55.63	58.41	61.26	13
14	40.59	42.89	45.26	47.70	50.22	52.81	55.48	58.22	61.04	63.93	14
15	43.00	45.33	47.74	50.22	52.78	55.41	58.11	60.89	63.74	66.67	15
16	45.48	47.85	50.30	52.81	55.41	58.07	60.81	63.63	66.52	69.48	16
17	48.04	50.44	52.93	55.48	58.11	60.81	63.59	66.44	69.37	72.37	17
18	50.67	53.11	55.63	58.22	60.89	63.63	66.44	69.33	72.30	75.33	18
19	53.37	55.85	58.41	61.04	63.74	66.52	69.37	72.30	75.30	78.37	19
20	56.15	58.67	61.26	63.93	66.67	69.48	72.37	75.33	78.37	81.48	20
21	59.00	61.56	64.19	66.89	69.67	72.52	75.44	78.44	81.52	84.67	21
22	61.93	64.52	67.19	69.93	72.74	75.63	78.59	81.63	84.74	87.93	22
23	64.93	67.56	70.26	73.04	75.89	78.81	81.81	84.89	88.04	91.26	23
24	68.00	70.67	73.41	76.22	79.11	82.07	85.11	88.22	91.41	94.67	24
25	71.15	73.85	76.63	79.48	82.41	85.41	88.48	91.63	94.85	98.15	25
26	74.37	77.11	79.93	82.81	85.78	88.81	91.93	95.11	98.37	101.70	26
27	77.67	80.44	83.30	86.22	89.22	92.30	95.44	98.67	101.96	105.33	27
28	81.04	83.85	86.74	89.70	92.74	95.85	99.04	102.30	105.63	109.04	28
29	84.48	87.33	90.26	93.26	96.33	99.48	102.70	106.00	109.37	112.81	29
30	88.00	90.89	93.85	96.89	100.00	103.19	106.44	109.78	113.19	116.67	30
31	91.59	94.52	97.52	100.59	103.74	106.96	110.26	113.63	117.07	120.59	31
32	95.26	98.22	101.26	104.37	107.56	110.81	114.15	117.56	121.04	124.59	32
33	99.00	102.00	105.07	108.22	111.44	114.74	118.11	121.56	125.07	128.67	33
34	102.81	105.85	108.96	112.15	115.41	118.74	122.15	125.63	129.19	132.81	34
35	106.70	109.78	112.93	116.15	119.44	122.81	126.26	129.78	133.37	137.04	35
36	110.67	113.78	116.96	120.22	123.56	126.96	130.44	134.00	137.63	141.33	36
37	114.70	117.85	121.07	124.37	127.74	131.19	134.70	138.30	141.96	145.70	37
38	118.81	122.00	125.26	128.59	132.00	135.48	139.04	142.67	146.37	150.15	38
39	123.00	126.22	129.52	132.89	136.33	139.85	143.44	147.11	150.85	154.67	39
40	127.26	130.52	133.85	137.26	140.74	144.30	147.93	151.63	155.41	159.26	40
41	131.59	134.89	138.26	141.70	145.22	148.81	152.48	156.22	160.04	163.93	41
42	136.00	139.33	142.74	146.22	149.78	153.41	157.11	160.89	164.74	168.67	42
43	140.48	143.85	147.30	150.81	154.41	158.07	161.81	165.63	169.52	173.48	43
44	145.04	148.44	151.93	155.48	159.11	162.81	166 59	170.44	174.37	178.37	44
45	149.67	153.11	156.63	160.22	163.89	167.63	171.44	175.33	179.30	183.33	45
46	154.37	157.85	161.41	165.04	168.74	172.52	176.37	180.30	184.30	188.37	46
47	159.15	162.67	166.26	169.93	173.67	177.48	181.37	185.33	189.37	193.48	47
48	164.00	167.56	171.19	174.89	178.67	182.52	186.44	190.44	194.52	198.67	48
49	168.93	172.52	176.19	179.93	183.74	187.63	191.59	195.63	199.74	203.93	49
50	173.93	177.56	181.26	185.04	188.89	192.81	196.81	200.89	205.04	209.26	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XXII.—BASE 50—SLOPES 3 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	35.78	38.30	40.89	43.56	46.30	49.11	52.00	54.96	58.00	61.11	0
1	37.52	40.07	42.70	45.41	48.19	51.04	53.96	56.96	60.04	63.19	1
2	39.33	41.93	44.59	47.33	50.15	53.04	56.00	59.04	62.15	65.33	2
3	41.22	43.85	46.56	49.33	52.19	55.11	58.11	61.19	64.33	67.56	3
4	43.19	45.85	48.59	51.41	54.30	57.26	60.30	63.41	66.59	69.85	4
5	45.22	47.93	50.70	53.56	56.48	59.48	62.56	65.70	68.93	72.22	5
6	47.33	50.07	52.89	55.78	58.74	61.78	64.89	68.07	71.33	74.67	6
7	49.52	52.30	55.15	58.07	61.07	64.15	67.30	70.52	73.81	77.19	7
8	51.78	54.59	57.48	60.44	63.48	66.59	69.78	73.04	76.37	79.78	8
9	54.11	56.96	59.89	62.89	65.96	69.11	72.33	75.63	79.00	82.44	9
10	56.52	59.41	62.37	65.41	68.52	71.70	74.96	78.30	81.70	85.19	10
11	59.00	61.93	64.93	68.00	71.15	74.37	77.67	81.04	84.48	88.00	11
12	61.56	64.52	67.56	70.67	73.85	77.11	80.44	83.85	87.33	90.89	12
13	64.19	67.19	70.26	73.41	76.63	79.93	83.30	86.74	90.26	93.85	13
14	66.89	69.93	73.04	76.22	79.48	82.81	86.22	89.70	93.26	96.89	14
15	69.67	72.74	75.89	79.11	82.41	85.78	89.22	92.74	96.33	100.00	15
16	72.52	75.63	78.81	82.07	85.41	88.81	92.30	95.85	99.48	103.19	16
17	75.44	78.59	81.81	85.11	88.48	91.93	95.44	99.04	102.70	106.44	17
18	78.44	81.63	84.89	88.22	91.63	95.11	98.67	102.30	106.00	109.78	18
19	81.52	84.74	88.04	91.41	94.85	98.37	101.96	105.63	109.37	113.19	19
20	84.67	87.93	91.26	94.67	98.15	101.70	105.33	109.04	112.81	116.67	20
21	87.89	91.19	94.56	98.00	101.52	105.11	108.78	112.52	116.33	120.22	21
22	91.19	94.52	97.93	101.41	104.96	108.59	112.30	116.07	119.93	123.85	22
23	94.56	97.93	101.37	104.89	108.48	112.15	115.89	119.70	123.59	127.56	23
24	98.00	101.41	104.89	108.44	112.07	115.78	119.56	123.41	127.33	131.33	24
25	101.52	104.96	108.48	112.07	115.74	119.48	123.30	127.19	131.15	135.19	25
26	105.11	108.59	112.15	115.78	119.48	123.26	127.11	131.04	135.04	139.11	26
27	108.78	112.30	115.89	119.56	123.30	127.11	131.00	134.96	139.00	143.11	27
28	112.52	116.07	119.70	123.41	127.19	131.04	134.96	138.96	143.04	147.19	28
29	116.33	119.93	123.59	127.33	131.15	135.04	139.00	143.04	147.15	151.33	29
30	120.22	123.85	127.56	131.33	135.19	139.11	143.11	147.19	151.33	155.56	30
31	124.19	127.85	131.59	135.41	139.30	143.26	147.30	151.41	155.59	159.85	31
32	128.22	131.93	135.70	139.56	143.48	147.48	151.56	155.70	159.93	164.22	32
33	132.33	136.07	139.89	143.78	147.74	151.78	155.89	160.07	164.33	168.67	33
34	136.52	140.30	144.15	148.07	152.07	156.15	160.30	164.52	168.81	173.19	34
35	140.78	144.59	148.48	152.44	156.48	160.59	164.78	169.04	173.37	177.78	35
36	145.11	148.96	152.89	156.89	160.96	165.11	169.33	173.63	178.00	182.44	36
37	149.52	153.41	157.37	161.41	165.52	169.70	173.96	178.30	182.70	187.19	37
38	154.00	157.93	161.93	166.00	170.15	174.37	178.67	183.04	187.48	192.00	38
39	158.56	162.52	166.56	170.67	174.85	179.11	183.44	187.85	192.33	196.89	39
40	163.19	167.19	171.26	175.41	179.63	183.93	188.30	192.74	197.26	201.85	40
41	167.89	171.93	176.04	180.22	184.48	188.81	193.22	197.70	202.26	206.89	41
42	172.67	176.74	180.89	185.11	189.41	193.78	198.22	202.74	207.33	212.00	42
43	177.52	181.63	185.81	190.07	194.41	198.81	203.30	207.85	212.48	217.19	43
44	182.44	186.59	190.81	195.11	199.48	203.93	208.44	213.04	217.70	222.44	44
45	187.44	191.63	195.89	200.22	204.63	209.11	213.67	218.30	223.00	227.78	45
46	192.52	196.74	201.04	205.41	209.85	214.37	218.96	223.63	228.37	233.19	46
47	197.67	201.93	206.26	210.67	215.15	219.70	224.33	229.04	233.81	238.67	47
48	202.89	207.19	211.56	216.00	220.52	225.11	229.78	234.52	239.33	244.22	48
49	208.19	212.52	216.93	221.41	225.96	230.59	235.30	240.07	244.93	249.85	49
50	213.56	217.93	222.37	226.89	231.48	236.15	240.89	245.70	250.59	255.56	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XXII.—BASE 50—SLOPES 3 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	64.30	67.56	70.89	74.30	77.78	81.33	84.96	88.67	92.44	96.30	0
1	66.41	69.70	73.07	76.52	80.04	83.63	87.30	91.04	94.85	98.74	1
2	68.59	71.93	75.33	78.81	82.37	86.00	89.70	93.48	97.33	101.26	2
3	70.85	74.22	77.67	81.19	84.78	88.44	92.19	96.00	99.89	103.85	3
4	73.19	76.59	80.07	83.63	87.26	90.96	94.74	98.59	102.52	106.52	4
5	75.59	79.04	82.56	86.15	89.81	93.56	97.37	101.26	105.22	109.26	5
6	78.07	81.56	85.11	88.74	92.44	96.22	100.07	104.00	108.00	112.07	6
7	80.63	84.15	87.74	91.41	95.15	98 96	102.85	106.81	110.85	114.96	7
8	83.26	86.81	90.44	94.15	97.93	101.78	105.70	109.70	113.78	117.93	8
9	85.96	89.56	93.22	96.96	100.78	104.67	108.63	112.67	116.78	120.96	9
10	88.74	92.37	96.07	99.85	103.70	107.63	111.63	115.70	119.85	124.07	10
11	91.59	95.26	99.00	102.81	106.70	110.67	114.70	118.81	123.00	127.26	11
12	94.52	98.22	102.00	105.85	109.78	113.78	117.85	122.00	126.22	130.52	12
13	97.52	101.26	105.07	108.96	112.93	116.96	121.07	125.26	129.52	133.85	13
14	100.59	104.37	108.22	112.15	116.15	120.22	124.37	128.59	132.89	137.26	14
15	103.74	107.56	111.44	115.41	119.44	123.56	127.74	132.00	136.33	140.74	15
16	106.96	110.81	114.74	118.74	122.81	126.96	131.19	135.48	139.85	144.30	16
17	110.26	114.15	118.11	122.15	126.26	130.44	134.70	139.04	143.44	147.93	17
18	113.63	117.56	121.56	125.63	129.78	134.00	138.30	142.67	147.11	151.63	18
19	117.07	121.04	125.07	129.19	133.37	137.63	141.96	146.37	150.85	155.41	19
20	120.59	124.59	128.67	132.81	137.04	141.33	145.70	150.15	154.67	159.26	20
21	124.19	128.22	132.33	136.52	140.78	145.11	149.52	154.00	158.56	163.19	21
22	127.85	131.93	136.07	140.30	144.59	148.96	153.41	157.93	162.52	167.19	22
23	131.59	135.70	139.89	144.15	148.48	152.89	157.37	161.93	166.56	171.26	23
24	135.41	139.56	143.78	148.07	152.44	156.89	161.41	166.00	170.67	175.41	24
25	139.30	143.48	147.74	152.07	156.48	160.96	165.52	170.15	174.85	179.63	25
26	143.26	147.48	151.78	156.15	160.59	165.11	169.70	174.37	179.11	183.93	26
27	147.30	151.56	155.89	160.30	164.78	169.33	173.96	178.67	183.44	188.30	27
28	151.41	155.70	160.07	164.52	169.04	173.63	178.30	183.04	187.85	192.74	28
29	155.59	159.93	164.33	168.81	173.37	178.00	182.70	187.48	192.33	197.26	29
30	159.85	164.22	168.67	173.19	177.78	182.44	187.19	192.00	196.89	201.85	30
31	164.19	168.59	173.07	177.63	182.26	186.96	191.74	196.59	201.52	206.52	31
32	168.59	173.04	177.56	182.15	186.81	191.56	196.37	201.26	206.22	211.26	32
33	173.07	177.56	182.11	186.74	191.44	196.22	201.07	206.00	211.00	216.07	33
34	177.63	182.15	186.74	191.41	196.15	200.96	205.85	210.81	215.85	220.96	34
35	182.26	186.81	191.44	196.15	200.93	205.78	210.70	215.70	220.78	225.93	35
36	186.96	191.56	196.22	200.96	205.78	210.67	215.63	220.67	225.78	230.96	36
37	191.74	196.37	201.07	205.85	210.70	215.63	220.63	225.70	230.85	236.07	37
38	196.59	201.26	206.00	210.81	215.70	220.67	225.70	230.81	236.00	241.26	38
39	201.52	206.22	211.00	215.85	220.78	225.78	230.85	236.00	241.22	246.52	39
40	206.52	211.26	216.07	220.96	225.93	230.96	236.07	241.26	246.52	251.85	40
41	211.59	216.37	221.22	226.15	231.15	236.22	241.37	246.59	251.89	257.26	41
42	216.74	221.56	226.44	231.41	236.44	241.56	246.74	252.00	257.33	262.74	42
43	221.96	226.81	231.74	236.74	241.81	246.96	252.19	257.48	262.85	268.30	43
44	227.26	232.15	237.11	242.15	247.26	252.44	257.70	263.04	268.44	273.93	44
45	232.63	237.56	242.56	247.63	252.78	258.00	263.30	268.67	274.11	279.63	45
46	238.07	243.04	248.07	253.19	258.37	263.63	268.96	274.37	279.85	285.41	46
47	243.59	248.59	253.67	258.81	264.04	269.33	274.70	280.15	285.67	291.26	47
48	249.19	254.22	259.33	264.52	269.78	275.11	280.52	286.00	291.56	297.19	48
49	254.85	259.93	265.07	270.30	275.59	280.96	286.41	291.93	297.52	303.19	49
50	259.59	265.70	270.89	276.15	281.48	286.89	292.37	297.93	303.56	309.26	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XXII.—BASE 50—SLOPES 3 *to* 1.

Feet.	41	42	13	44	45	46	47	48	49	50	Feet.
0	100.22	104.22	108.30	112.44	116.67	120.96	125.33	129.78	134.30	138.89	0
1	102.70	106.74	110.85	115.04	119.30	123.63	128.04	132.52	137.07	141.70	1
2	105.26	109.33	113.48	117.70	122.00	126.37	130.81	135.33	139.93	144.59	2
3	107.89	112.00	116.19	120.44	124.78	129.19	133.67	138.22	142.85	147.56	3
4	110.59	114.74	118.96	123.26	127.63	132.07	136.59	141.19	145.85	150.59	4
5	113.37	117.56	121.81	126.15	130.56	135.04	139.59	144.22	148.93	153.70	5
6	116.22	120.44	124.74	129.11	133.56	138.07	142.67	147.33	152.07	156.89	6
7	119.15	123.41	127.74	132.15	136.63	141.19	145.81	150.52	155.30	160.15	7
8	122.15	126.44	130.81	135.26	139.78	144.37	149.04	153.78	158.59	163.48	8
9	125.22	129.56	133.96	138.44	143.00	147.63	152.33	157.11	161.96	166.89	9
10	128.37	132.74	137.19	141.70	146.30	150.96	155.70	160.52	165.41	170.37	10
11	131.59	136.00	140.48	145.04	149.67	154.37	159.15	164.00	168.93	173.93	11
12	134.89	139.33	143.85	148.44	153.11	157.85	162.67	167.56	172.52	177.56	12
13	138.26	142.74	147.30	151.93	156.63	161.41	166.26	171.19	176.19	181.26	13
14	141.70	146.22	150.81	155.48	160.22	165.04	169.93	174.89	179.93	185.04	14
15	145.22	149.78	154.41	159.11	163.89	168.74	173.67	178.67	183.74	188.89	15
16	148.81	153.41	158.07	162.81	167.63	172.52	177.48	182.52	187.63	192.81	16
17	152.48	157.11	161.81	166.59	171.44	176.37	181.37	186.44	191.59	196.81	17
18	156.22	160.89	165.63	170.44	175.33	180.30	185.33	190.44	195.63	200.89	18
19	160.04	164.74	169.52	174.37	179.30	184.30	189.37	194.52	199.74	205.04	19
20	163.93	168.67	173.48	178.37	183.33	188.37	193.48	198.67	203.93	209.26	20
21	167.89	172.67	177.52	182.44	187.44	192.52	197.67	202.89	208.19	213.56	21
22	171.93	176.74	181.63	186.59	191.63	196.74	201.93	207.19	212.53	217.93	22
23	176.04	180.89	185.81	190.81	195.89	201.04	206.26	211.56	216.93	222.37	23
24	180.22	185.11	190.07	195.11	200.22	205.41	210.67	216.00	221.41	226.89	24
25	184.48	189.41	194.41	199.48	204.63	209.85	215.15	220.52	225.96	231.48	25
26	188.81	193.78	198.81	203.93	209.11	214.37	219.70	225.11	230.59	236.15	26
27	193.22	198.22	203.30	208.44	213.67	218.96	224.33	229.78	235.30	240.89	27
28	197.70	202.74	207.85	213.04	218.30	223.63	229.04	234.52	240.07	245.70	28
29	202.26	207.33	212.48	217.70	223.00	228.37	233.81	239.33	244.93	250.59	29
30	206.89	212.00	217.19	222.44	227.78	233.19	238.67	244.22	249.85	255.56	30
31	211.59	216.74	221.96	227.26	232.63	238.07	243.59	249.19	254.85	259.59	31
32	216.37	221.56	226.81	232.15	237.56	243.04	248.59	254.22	259.93	265.70	32
33	221.22	226.44	231.74	237.11	242.56	248.07	253.67	259.33	265.07	270.89	33
34	226.15	231.41	236.74	242.15	247.63	253.19	258.81	264.52	270.30	276.15	34
35	231.15	236.44	241.81	247.26	252.78	258.37	264.04	269.78	275.59	281.48	35
36	236.22	241.56	246.96	252.44	258.00	263.63	269.33	275.11	280.96	286.89	36
37	241.37	246.74	252.19	257.70	263.30	268.96	274.70	280.52	286.41	292.37	37
38	246.59	252.00	257.48	263.04	268.67	274.37	280.15	286.00	291.93	297.93	38
39	251.89	257.33	262.85	268.44	274.11	279.85	285.67	291.56	297.52	303.56	39
40	257.26	262.74	268.30	273.93	279.63	285.41	291.26	297.19	303.19	309.26	40
41	262.70	268.22	273.81	279.48	285.22	291.04	296.93	302.89	308.93	315.04	41
42	268.22	273.78	279.41	285.11	290.89	296.74	302.67	308.67	314.74	320.89	42
43	273.81	279.41	285.07	290.81	296.63	302.52	308.48	314.52	320.63	326.81	43
44	279.48	285.11	290.81	296.59	302.44	308.37	314.37	320.44	326.59	332.81	44
45	285.22	290.89	296.63	302.44	308.33	314.30	320.33	326.44	332.63	338.89	45
46	291.04	296.74	302.52	308.37	314.30	320.30	326.37	332.52	338.74	345.04	46
47	296.93	302.67	308.48	314.37	320.33	326.37	332.48	338.67	344.93	351.26	47
48	302.89	308.67	314.52	320.44	326.44	332.52	338.67	344.89	351.19	357.56	48
49	308.93	314.74	320.63	326.59	332.63	338.74	344.93	351.19	357.52	363.93	49
50	315.04	320.89	326.81	332.81	338.89	345.04	351.26	357.56	363.93	370.37	50
	41	42	43	44	45	46	47	48	49	50	

SECOND SERIES

OF

TABLES.

Slopes from $\frac{1}{2}$ *to* 1—*to* 3 *to* 1.

BASE I.

TABLE XXIII.—BASE 1—SLOPES $\frac{1}{2}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	.006	.0370	. 25	.0556	.056	.0741	.099	.0926	.154	0
1	.0370	.019	.0556	.043	.0741	.080	.0926	.130	.1111	.192	1
2	.0556	.043	.0741	.074	.0926	.117	.1111	.173	.1296	.241	2
3	.0741	.080	.0926	.117	.1111	.167	.1296	.228	.1481	.302	3
4	.0926	.130	.1111	.173	.1296	.228	.1481	.296	.1667	.377	4
5	.1111	.192	.1296	.241	.1481	.302	.1667	.377	.1852	.463	5
6	.1296	.265	.1481	.321	.1667	.389	.1852	.469	.2047	.562	6
7	.1481	.352	.1667	.414	.1852	.488	.2047	.574	.2222	.673	7
8	.1667	.451	.1852	.519	.2047	.599	.2222	.691	.2407	.796	8
9	.1852	.562	.2047	.636	.2222	.722	.2407	.821	.2593	.932	9
10	.2047	.685	.2222	.765	.2407	.858	.2593	.963	.2778	1.080	10
11	.2222	.821	.2407	.907	.2593	1.006	.2778	1.117	.2963	1.241	11
12	.2407	.969	.2593	1.062	.2778	1.167	.2963	1.284	.3148	1.414	12
13	.2593	1.130	.2778	1.228	.2963	1.340	.3148	1.463	.3333	1.599	13
14	.2778	1.302	.2963	1.407	.3148	1.525	.3333	1.654	.3519	1.796	14
15	.2963	1.488	.3148	1.599	.3333	1.722	.3519	1.858	.3704	2.006	15
16	.3148	1.685	.3333	1.802	.3519	1.932	.3704	2.074	.3889	2.228	16
17	.3333	1.895	.3519	2.019	.3704	2.154	.3889	2.302	.4074	2.463	17
18	.3519	2.117	.3704	2.247	.3889	2.389	.4074	2.543	.4259	2.710	18
19	.3704	2.352	.3889	2.488	.4074	2.636	.4259	2.796	.4444	2.969	19
20	.3889	2.599	.4074	2.741	.4259	2.895	.4444	3.062	.4630	3.241	20
21	.4074	2.858	.4259	3.006	.4444	3.167	.4630	3.340	.4815	3.525	21
22	.4259	3.130	.4444	3.284	.4630	3.451	.4815	3.630	.5000	3.821	22
23	.4444	3.414	.4630	3.574	.4815	3.747	.5000	3.932	.5185	4.130	23
24	.4630	3.710	.4815	3.877	.5000	4.056	.5185	4.247	.5370	4.451	24
25	.4815	4.019	.5000	4.191	.5185	4.377	.5370	4.574	.5556	4.784	25
26	.5000	4.340	.5185	4.519	.5370	4.710	.5556	4.914	.5741	5.130	26
27	.5185	4.673	.5370	4.858	.5556	5.056	.5741	5.265	.5926	5.488	27
28	.5370	5.019	.5556	5.210	.5741	5.414	.5926	5.630	.6111	5.858	28
29	.5556	5.377	.5741	5.574	.5926	5.784	.6111	6.006	.6296	6.241	29
30	.5741	5.747	.5926	5.951	.6111	6.167	.6296	6.395	.6481	6.636	30
31	.5926	6.130	.6111	6.340	.6296	6.562	.6481	6.796	.6667	7.043	31
32	.6111	6.525	.6296	6.741	.6481	6.969	.6667	7.210	.6852	7.463	32
33	.6296	6.932	.6481	7.154	.6667	7.389	.6852	7.636	.7037	7.895	33
34	.6481	7.352	.6667	7.580	.6852	7.821	.7037	8.074	.7222	8.340	34
35	.6667	7.784	.6852	8.019	.7037	8.265	.7222	8.525	.7407	8.796	35
36	.6852	8.228	.7037	8.469	.7222	8.722	.7407	8.988	.7593	9.265	36
37	.7037	8.685	.7222	8.932	.7407	9.191	.7593	9.463	.7778	9.747	37
38	.7222	9.154	.7407	9.407	.7593	9.673	.7778	9.951	.7963	10.241	38
39	.7407	9.636	.7593	9.895	.7778	10.167	.7963	10.451	.8148	10.747	39
40	.7593	10.130	.7778	10.395	.7963	10.673	.8148	10.963	.8333	11.265	40
41	.7778	10.636	.7963	10.907	.8148	11.191	.8333	11.488	.8519	11.796	41
42	.7963	11.154	.8148	11.432	.8333	11.722	.8519	12.025	.8704	12.340	42
43	.8148	11.685	.8333	11.969	.8519	12.265	.8704	12.574	.8889	12.895	43
44	.8333	12.228	.8519	12.519	.8704	12.821	.8889	13.136	.9074	13.463	44
45	.8519	12.784	.8704	13.080	.8889	13.389	.9074	13.710	.9259	14.043	45
46	.8704	13.352	.8889	13.654	.9074	13.969	.9259	14.296	.9444	14.636	46
47	.8889	13.932	.9074	14.241	.9259	14.562	.9444	14.895	.9630	15.241	47
48	.9074	14.525	.9259	14.840	.9444	15.167	.9630	15.506	.9815	15.858	48
49	.9259	15.130	.9444	15.451	.9630	15.784	.9815	16.160	1.0000	16.488	49
50	.9444	15.747	.9630	16.074	.9815	16.414	1.0000	16.765	1.0185	17.130	50
	1		2		3		4		5		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	.222	.1296	.302	.1481	.395	.1667	.500	.1852	.617	0
1	.1296	.265	.1481	.352	.1667	.451	.1852	.562	.2047	.685	1
2	.1481	.321	.1667	.414	.1852	.519	.2047	.636	.2222	.765	2
3	.1667	.389	.1852	.488	.2047	.599	.2222	.722	.2407	.858	3
4	.1852	.469	.2047	.574	.2222	.691	.2407	.821	.2593	.963	4
5	.2047	.562	.2222	.673	.2407	.796	.2593	.932	.2778	1.080	5
6	.2222	.667	.2407	.784	.2593	.914	.2778	1.056	.2963	1.210	6
7	.2407	.784	.2593	.907	.2778	1.043	.2963	1.191	.3148	1.352	7
8	.2593	.914	.2778	1.043	.2963	1.185	.3148	1.340	.3333	1.506	8
9	.2778	1.056	.2963	1.191	.3148	1.340	.3333	1.500	.3519	1.673	9
10	.2963	1.210	.3148	1.352	.3333	1.506	.3519	1.673	.3704	1.852	10
11	.3148	1.377	.3333	1.525	.3519	1.685	.3704	1.858	.3889	2.043	11
12	.3333	1.556	.3519	1.710	.3704	1.877	.3889	2.056	.4074	2.247	12
13	.3519	1.747	.3704	1.907	.3889	2.080	.4074	2.265	.4259	2.463	13
14	.3704	1.951	.3889	2.117	.4074	2.296	.4259	2.488	.4444	2.691	14
15	.3889	2.167	.4074	2.340	.4259	2.525	.4444	2.722	.4630	2.932	15
16	.4074	2.395	.4259	2.574	.4444	2.765	.4630	2.969	.4815	3.185	16
17	.4259	2.636	.4444	2.821	.4630	3.019	.4815	3.228	.5000	3.451	17
18	.4444	2.889	.4630	3.080	.4815	3.284	.5000	3.500	.5185	3.728	18
19	.4630	3.154	.4815	3.352	.5000	3.562	.5185	3.784	.5370	4.019	19
20	.4815	3.432	.5000	3.636	.5185	3.852	.5370	4.080	.5556	4.321	20
21	.5000	3.722	.5185	3.932	.5370	4.154	.5556	4.389	.5741	4.636	21
22	.5185	4.025	.5370	4.241	.5556	4.469	.5741	4.710	.5926	4.963	22
23	.5370	4 340	.5556	4.562	.5741	4.796	.5926	5.043	.6111	5.302	23
24	.5556	4.667	.5741	4.895	.5926	5.136	.6111	5.389	.6296	5.654	24
25	.5741	5.006	.5926	5.241	.6111	5.488	.6296	5.747	.6481	6.019	25
26	.5926	5.358	.6111	5.599	.6296	5.852	.6481	6.117	.6667	6.395	26
27	.6111	5.722	.6296	5.969	.6481	6.228	.6667	6.500	.6852	6.784	27
28	.6296	6.099	.6481	6.352	.6667	6.617	.6852	6.895	.7037	7.185	28
29	.6481	6.488	.6667	6.747	.6852	7.019	.7037	7.302	.7222	7.599	29
30	.6667	6.889	.6852	7.154	.7037	7.432	.7222	7.722	.7407	8.025	30
31	.6852	7.302	.7037	7.574	.7222	7.858	.7407	8.154	.7593	8.463	31
32	.7037	7.728	.7222	8.006	.7407	8.296	.7593	8.599	.7778	8.914	32
33	.7222	8.167	.7407	8.451	.7593	8.747	.7778	9.056	.7963	9.377	33
34	.7407	8.617	.7593	8.907	.7778	9.210	.7963	9.525	.8148	9.852	34
35	.7593	9.080	.7778	9.377	.7963	9.685	.8148	10.006	.8333	10.340	35
36	.7778	9.556	.7963	9.858	.8148	10.173	.8333	10.500	.8519	10.840	36
37	.7963	10.043	.8148	10.352	.8333	10.673	.8519	11.006	.8704	11.352	37
38	.8148	10.543	.8333	10.858	.8519	11.185	.8704	11.525	.8889	11.877	38
39	.8333	11.056	.8519	11.377	.8704	11.710	.8889	12.056	.9074	12.414	39
40	.8519	11.580	.8704	11.907	.8889	12.247	.9074	12.599	.9259	12.963	40
41	.8704	12.117	.8889	12.451	.9074	12.796	.9259	13.154	.9444	13.525	41
42	.8889	12.667	.9074	13.006	.9259	13.358	.9444	13.722	.9630	14.099	42
43	.9074	13.228	.9259	13.574	.9444	13.932	.9630	14.302	.9815	14.685	43
44	.9259	13.802	.9444	14.154	.9630	14.519	.9815	14.895	1.0000	15.284	44
45	.9444	14.389	.9630	14.747	.9815	15.117	1.0000	15.500	1.0185	15.895	45
46	.9630	14.988	.9815	15.352	1.0000	15.728	1.0185	16.117	1.0370	16.519	46
47	.9815	15.599	1.0000	15.969	1.0185	16.352	1.0370	16.747	1.0556	17.154	47
48	1.0000	16.222	1.0185	16.599	1.0370	16.988	1.0556	17.389	1.0741	17.802	48
49	1.0185	16.858	1.0370	17.241	1.0556	17.636	1.0741	18.043	1.0926	18.463	49
50	1.0370	17.506	1.0556	17.895	1.0741	18.296	1.0926	18.710	1.1111	19.136	50
	6		7		8		9		10		

TABLE XXIII.—BASE 1—SLOPES $\frac{1}{2}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	.747	.2222	.889	.2407	1.043	.2593	1.210	.2778	1.389	0
1	.2222	.821	.2407	.969	.2593	1.130	.2778	1.302	.2963	1.488	1
2	.2407	.907	.2593	1.062	.2778	1.228	.2963	1.407	.3148	1.599	2
3	.2593	1.006	.2778	1.167	.2963	1.340	.3148	1.525	.3333	1.722	3
4	.2778	1.117	.2963	1.284	.3148	1.463	.3333	1.654	.3519	1.858	4
5	.2963	1.241	.3148	1.414	.3333	1.599	.3519	1.796	.3704	2.006	5
6	.3148	1.377	.3333	1.556	.3519	1.747	.3704	1.951	.3889	2.167	6
7	.3335	1.525	.3519	1.710	.3704	1.907	.3889	2.117	.4074	2.340	7
8	.3519	1.685	.3704	1.877	.3889	2.080	.4074	2.296	.4259	2.525	8
9	.3704	1.858	.3889	2.056	.4074	2.265	.4259	2.488	.4444	2.722	9
10	.3889	2.043	.4074	2.247	.4259	2.463	.4444	2.691	.4630	2.932	10
11	.4074	2.241	.4259	2.451	.4444	2.673	.4630	2.907	.4815	3.154	11
12	.4259	2.451	.4444	2.667	.4630	2.895	.4815	3.136	.5000	3.389	12
13	.4444	2.673	.4630	2.895	.4815	3.130	.5000	3.377	.5185	3.636	13
14	.4630	2.907	.4815	3.136	.5000	3.377	.5185	3.630	.5370	3.895	14
15	.4815	3.154	.5000	3.389	.5185	3.636	.5370	3.895	.5556	4.167	15
16	.5000	3.414	.5185	3.654	.5370	3.907	.5556	4.173	.5741	4.451	16
17	.5185	3.685	.5370	3.932	.5556	4.191	.5741	4.463	.5926	4.747	17
18	.5370	3.969	.5556	4.222	.5741	4.488	.5926	4.765	.6111	5.056	18
19	.5556	4.265	.5741	4.525	.5926	4.796	.6111	5.080	.6296	5.377	19
20	.5741	4.574	.5926	4.840	.6111	5.117	.6296	5.407	.6481	5.710	20
21	.5926	4.895	.6111	5.167	.6296	5.451	.6481	5.747	.6667	6.056	21
22	.6111	5.228	.6296	5.506	.6481	5.796	.6667	6.099	.6852	6.414	22
23	.6296	5.574	.6481	5.858	.6667	6.154	.6852	6.463	.7037	6.784	23
24	.6481	5.932	.6667	6.222	.6852	6.525	.7037	6.840	.7222	7.167	24
25	.6667	6.302	.6852	6.599	.7037	6.907	.7222	7.228	.7407	7.562	25
26	.6852	6.685	.7037	6.988	.7222	7.302	.7407	7.630	.7593	7.969	26
27	.7037	7.080	.7222	7.389	.7407	7.710	.7593	8.043	.7778	8.389	27
28	.7222	7.488	.7407	7.802	.7593	8.130	.7778	8.469	.7963	8.821	28
29	.7407	7.907	.7593	8.228	.7778	8.562	.7963	8.907	.8148	9.265	29
30	.7593	8.340	.7778	8.667	.7963	9.006	.8148	9.358	.8333	9.722	30
31	.7778	8.784	.7963	9.117	.8148	9.463	.8333	9.821	.8519	10.191	31
32	.7963	9.241	.8148	9.580	.8333	9.932	.8519	10.296	.8704	10.673	32
33	.8148	9.710	.8333	10.056	.8519	10.414	.8704	10.784	.8889	11.167	33
34	.8333	10.191	.8519	10.543	.8704	10.907	.8889	11.284	.9074	11.673	34
35	.8519	10.685	.8704	11.043	.8889	11.414	.9074	11.796	.9259	12.191	35
36	.8704	11.191	.8889	11.556	.9074	11.932	.9259	12.321	.9444	12.722	36
37	.8889	11.710	.9074	12.080	.9259	12.463	.9444	12.858	.9630	13.265	37
38	.9074	12.241	.9259	12.617	.9444	13.006	.9630	13.407	.9815	13.821	38
39	.9259	12.784	.9444	13.167	.9630	13.562	.9815	13.969	1.0000	14.389	39
40	.9444	13.340	.9630	13.728	.9815	14.130	1.0000	14.543	1.0185	14.969	40
41	.9630	13.907	.9815	14.302	1.0000	14.710	1.0185	15.130	1.0370	15.562	41
42	.9815	14.488	1.0000	14.889	1.0185	15.302	1.0370	15.728	1.0556	16.167	42
43	1.0000	15.080	1.0185	15.488	1.0370	15.907	1.0556	16.340	1.0741	16.784	43
44	1.0185	15.685	1.0370	16.099	1.0556	16.525	1.0741	16.963	1.0926	17.414	44
45	1.0370	16.302	1.0556	16.722	1.0741	17.154	1.0926	17.599	1.1111	18.056	45
46	1.0556	16.932	1.0741	17.358	1.0926	17.796	1.1111	18.247	1.1296	18.710	46
47	1.0741	17.574	1.0926	18.006	1.1111	18.451	1.1296	18.907	1.1481	19.377	47
48	1.0926	18.228	1.1111	18.667	1.1296	19.117	1.1481	19.580	1.1667	20.056	48
49	1.1111	18.895	1.1296	19.340	1.1481	19.796	1.1667	20.265	1.1852	20.747	49
50	1.1296	19.574	1.1481	20.025	1.1667	20.488	1.1852	20.963	1.2047	21.451	50
	11		12		13		14		15		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	1.580	.3148	1.784	.3333	2.000	.3519	2.228	.3704	2.469	0
1	.3148	1.685	.3333	1.895	.3519	2.117	.3704	2.352	.3889	2.599	1
2	.3333	1.802	.3519	2.019	.3704	2.247	.3889	2.488	.4074	2.741	2
3	.3519	1.932	.3704	2.154	.3889	2.389	.4074	2.636	.4259	2.895	3
4	.3704	2.074	.3889	2.302	.4074	2.543	.4259	2.796	.4444	3.062	4
5	.3889	2.228	.4074	2.463	.4259	2.710	.4444	2.969	.4630	3.241	5
6	.4074	2.395	.4259	2.636	.4444	2.889	.4630	3.154	.4815	3.432	6
7	.4259	2.574	.4444	2.821	.4630	3.080	.4815	3.352	.5000	3.636	7
8	.4444	2.765	.4630	3.019	.4815	3.284	.5000	3.562	.5185	3.852	8
9	.4630	2.969	.4815	3.228	.5000	3.500	.5185	3.784	.5370	4.080	9
10	.4815	3.185	.5000	3.451	.5185	3.728	.5370	4.019	.5556	4.321	10
11	.5000	3.414	.5185	3.685	.5370	3.969	.5556	4.265	.5741	4.574	11
12	.5185	3.654	.5370	3.932	.5556	4.222	.5741	4.525	.5926	4.840	12
13	.5370	3.907	.5556	4.191	.5741	4.488	.5926	4.796	.6111	5.117	13
14	.5556	4.173	.5741	4.463	.5926	4.765	.6111	5.080	.6296	5.407	14
15	.5741	4.451	.5926	4.747	.6111	5.056	.6296	5.377	.6481	5.710	15
16	.5926	4.741	.6111	5.043	.6296	5.358	.6481	5.685	.6667	6.025	16
17	.6111	5.043	.6296	5.352	.6481	5.673	.6667	6.006	.6852	6.352	17
18	.6296	5.358	.6481	5.673	.6667	6.000	.6852	6.340	.7037	6.691	18
19	.6481	5.685	.6667	6.006	.6852	6.340	.7037	6.685	.7222	7.043	19
20	.6667	6.025	.6852	6.352	.7037	6.691	.7222	7.043	.7407	7.407	20
21	.6852	6.377	.7037	6.710	.7222	7.056	.7407	7.414	.7593	7.784	21
22	.7037	6.741	.7222	7.080	.7407	7.432	.7593	7.796	.7778	8.173	22
23	.7222	7.117	.7407	7.463	.7593	7.821	.7778	8.191	.7963	8.574	23
24	.7407	7.506	.7592	7.858	.7778	8.222	.7963	8.599	.8148	8.988	24
25	.7593	7.907	.7778	8.265	.7963	8.636	.8148	9.019	.8333	9.414	25
26	.7778	8.321	.7963	8.685	.8148	9.062	.8333	9.451	.8519	9.852	26
27	.7963	8.747	.8148	9.117	.8333	9.500	.8519	9.895	.8704	10.302	27
28	.8148	9.185	.8333	9.562	.8519	9.951	.8704	10.352	.8889	10.765	28
29	.8333	9.636	.8519	10.019	.8704	10.414	.8889	10.821	.9074	11.241	29
30	.8519	10.099	.8704	10.488	.8889	10.889	.9074	11.302	.9259	11.728	30
31	.8704	10.574	.8889	10.969	.9074	11.377	.9259	11.796	.9444	12.228	31
32	.8889	11.062	.9074	11.463	.9259	11.877	.9444	12.302	.9630	12.741	32
33	.9074	11.562	.9259	11.969	.9444	12.389	.9630	12.821	.9815	13.265	33
34	.9259	12.074	.9444	12.488	.9630	12.914	.9815	13.352	1.0000	13.803	34
35	.9444	12.599	.9630	13.019	.9815	13.451	1.0000	13.895	1.0185	14.352	35
36	.9630	13.136	.9815	13.562	1.0000	14.000	1.0185	14.451	1.0370	14.914	36
37	.9815	13.685	1.0000	14.117	1.0185	14.562	1.0370	15.019	1.0556	15.488	37
38	1.0000	14.247	1.0185	14.685	1.0370	15.136	1.0556	15.599	1.0741	16.074	38
39	1.0185	14.821	1.0370	15.265	1.0556	15.722	1.0741	16.191	1.0926	16.673	39
40	1.0370	15.407	1.0556	15.858	1.0741	16.321	1.0926	16.796	1.1111	17.284	40
41	1.0556	16.006	1.0741	16.463	1.0926	16.932	1.1111	17.414	1.1296	17.907	41
42	1.0741	16.617	1.0926	17.080	1.1111	17.556	1.1296	18.043	1.1481	18.543	42
43	1.0926	17.241	1.1111	17.710	1.1296	18.191	1.1481	18.685	1.1667	19.191	43
44	1.1111	17.877	1.1296	18.352	1.1481	18.840	1.1667	19.340	1.1852	19.852	44
45	1.1296	18.525	1.1481	19.006	1.1667	19.500	1.1852	20.006	1.2047	20.525	45
46	1.1481	19.185	1.1667	19.673	1.1852	20.173	1.2047	20.685	1.2222	21.210	46
47	1.1667	19.858	1.1852	20.352	1.2047	20.858	1.2222	21.377	1.2407	21.907	47
48	1.1852	20.543	1.2047	21.043	1.2222	21.556	1.2407	22.080	1.2593	22.617	48
49	1.2047	21.241	1.2222	21.747	1.2407	22.265	1.2593	22.796	1.2778	23.340	49
50	1.2222	21.951	1.2407	22.463	1.2593	22.988	1 2778	23.525	1.2963	24.074	50
	16		17		18		19		20		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	2.722	.4074	2.988	.4259	3.265	.4444	3.556	.4630	3.858	0
1	.4074	2.858	.4259	3.130	.4444	3.414	.4630	3.710	.4815	4.019	1
2	.4259	3.006	.4444	3.284	.4630	3.574	.4815	3.877	.5000	4.191	2
3	.4444	3.167	.4630	3.451	.4815	3.747	.5000	4.056	.5185	4.377	3
4	.4630	3.340	.4815	3.630	.5000	3.932	.5185	4.247	.5370	4.574	4
5	.4815	3.525	.5000	3.821	.5185	4.130	.5370	4.451	.5556	4.784	5
6	.5000	3.722	.5185	4.025	.5370	4.340	.5556	4.667	.5741	5.006	6
7	.5185	3.932	.5370	4.241	.5556	4.562	.5741	4.895	.5926	5.241	7
8	.5370	4.154	.5556	4.469	.5741	4.796	.5926	5.136	.6111	5.488	8
9	.5556	4.389	.5741	4.710	.5926	5.043	.6111	5.389	.6296	5.747	9
10	.5741	4.636	.5926	4.963	.6111	5.302	.6296	5.654	.6481	6.019	10
11	.5926	4.895	.6111	5.228	.6296	5.574	.6481	5.932	.6667	6.302	11
12	.6111	5.167	.6296	5.506	.6481	5.858	.6667	6.222	.6852	6.599	12
13	.6296	5.451	.6481	5.796	.6667	6.154	.6852	6.525	.7037	6.907	13
14	.6481	5.747	.6667	6.099	.6852	6.463	.7037	6.840	.7222	7.228	14
15	.6667	6.056	.6852	6.414	.7037	6.784	.7222	7.167	.7407	7.562	15
16	.6852	6.377	.7037	6.741	.7222	7.117	.7407	7.506	.7593	7.907	16
17	.7037	6.710	.7222	7.080	.7407	7.463	.7593	7.858	.7778	8.265	17
18	.7222	7.056	.7407	7.432	.7593	7.821	.7778	8.222	.7963	8.636	18
19	.7407	7.414	.7593	7.796	.7778	8.191	.7963	8.599	.8148	9.019	19
20	.7593	7.784	.7778	8.173	.7963	8.574	.8148	8.988	.8333	9.414	20
21	.7778	8.167	.7963	8.562	.8148	8.969	.8333	9.389	.8519	9.821	21
22	.7963	8.562	.8148	8.963	.8333	9.377	.8519	9.802	.8704	10.241	22
23	.8148	8.969	.8333	9.377	.8519	9.796	.8704	10.228	.8889	10.673	23
24	.8333	9.389	.8519	9.802	.8704	10.228	.8889	10.667	.9074	11.117	24
25	.8519	9.821	.8704	10.241	.8889	10.673	.9074	11.117	.9259	11.574	25
26	.8704	10.265	.8889	10.691	.9074	11.130	.9259	11.580	.9444	12.043	26
27	.8889	10.722	.9074	11.154	.9259	11.599	.9444	12.056	.9630	12.525	27
28	.9074	11.191	.9259	11.630	.9444	12.080	.9630	12.543	.9815	13.019	28
29	.9259	11.673	.9444	12.117	.9630	12.574	.9815	13.043	1.0000	13.525	29
30	.9444	12.167	.9630	12.617	.9815	13.080	1.0000	13.556	1.0185	14.043	30
31	.9630	12.673	.9815	13.130	1.0000	13.599	1.0185	14.080	1.0370	14.574	31
32	.9815	13.191	1.0000	13.654	1.0185	14.130	1.0370	14.617	1.0556	15.117	32
33	1.0000	13.722	1.0185	14.191	1.0370	14.673	1.0556	15.167	1.0741	15.673	33
34	1.0185	14.265	1.0370	14.741	1.0556	15.228	1.0741	15.728	1.0926	16.241	34
35	1.0370	14.821	1.0556	15.302	1.0741	15.796	1.0926	16.302	1.1111	16.821	35
36	1.0556	15.389	1.0741	15.877	1.0926	16.377	1.1111	16.889	1.1296	17.414	36
37	1.0741	15.969	1.0926	16.463	1.1111	16.969	1.1296	17.488	1.1481	18.019	37
38	1.0926	16.562	1.1111	17.062	1.1296	17.574	1.1481	18.099	1.1667	18.636	38
39	1.1111	17.167	1.1296	17.673	1.1481	18.191	1.1667	18.722	1.1852	19.265	39
40	1.1296	17.784	1.1481	18.296	1.1667	18.821	1.1852	19.358	1.2047	19.907	40
41	1.1481	18.414	1.1667	18.932	1.1852	19.463	1.2047	20.006	1.2222	20.562	41
42	1.1667	19.056	1.1852	19.580	1.2047	20.117	1.2222	20.667	1.2407	21.228	42
43	1.1852	19.710	1.2047	20.241	1.2222	20.784	1.2407	21.340	1.2593	21.907	43
44	1.2047	20.377	1.2222	20.914	1.2407	21.463	1.2593	22.025	1.2778	22.599	44
45	1.2222	21.056	1.2407	21.599	1.2593	22.154	1.2778	22.722	1.2963	23.302	45
46	1.2407	21.747	1.2593	22.296	1.2778	22.858	1.2963	23.432	1.3148	24.019	46
47	1.2593	22.451	1.2778	23.006	1.2963	23.574	1.3148	24.154	1.3333	24.747	47
48	1.2778	23.167	1.2963	23.728	1.3148	24.302	1.3333	24.889	1.3519	25.488	48
49	1.2963	23.895	1.3148	24.463	1.3333	25.043	1.3519	25.636	1.3704	26.241	49
50	1.3148	24.636	1.3333	25.210	1.3519	25.796	1.3704	26.395	1.3889	27.006	50
	21		22		23		24		25		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	4.173	.5000	4.500	.5185	4.840	.5370	5.191	.5556	5.556	0
1	.5000	4.340	.5185	4.673	.5370	5.019	.5556	5.377	.5741	5.747	1
2	.5185	4.519	.5370	4.858	.5556	5.210	.5741	5.574	.5926	5.951	2
3	.5370	4.710	.5556	5.056	.5741	5.414	.5926	5.784	.6111	6.167	3
4	.5556	4.914	.5741	5.265	.5926	5.630	.6111	6.006	.6296	6.395	4
5	.5741	5.130	.5926	5.488	.6111	5.858	.6296	6.241	.6481	6.636	5
6	.5926	5.358	.6111	5.722	.6296	6.099	.6481	6.488	.6667	6.889	6
7	.6111	5.599	.6296	5.969	.6481	6.352	.6667	6.747	.6852	7.154	7
8	.6296	5.852	.6481	6.228	.6667	6.617	.6852	7.019	.7037	7.432	8
9	.6481	6.117	.6667	6.500	.6852	6.895	.7037	7.302	.7222	7.722	9
10	.6667	6.395	.6852	6.784	.7037	7.185	.7222	7.599	.7407	8.025	10
11	.6852	6.685	.7037	7.080	.7222	7.488	.7407	7.907	.7593	8.340	11
12	.7037	6.988	.7222	7.389	.7407	7.802	.7593	8.228	.7778	8.667	12
13	.7222	7.302	.7407	7.710	.7593	8.130	.7778	8.562	.7963	9.006	13
14	.7407	7.630	.7593	8.043	.7778	8.469	.7963	8.907	.8148	9.358	14
15	.7593	7.969	.7778	8.389	.7963	8.821	.8148	9.265	.8333	9.722	15
16	.7778	8.321	.7963	8.747	.8148	9.185	.8333	9.636	.8519	10.099	16
17	.7963	8.685	.8148	9.117	.8333	9.562	.8519	10.019	.8704	10.488	17
18	.8148	9.062	.8333	9.500	.8519	9.951	.8704	10.414	.8889	10.889	18
19	.8333	9.451	.8519	9.895	.8704	10.352	.8889	10.821	.9074	11.302	19
20	.8519	9.852	.8704	10.302	.8889	10.765	.9074	11.241	.9259	11.728	20
21	.8704	10.265	.8889	10.722	.9074	11.191	.9259	11.673	.9444	12.167	21
22	.8889	10.691	.9074	11.154	.9259	11.630	.9444	12.117	.9630	12.617	22
23	.9074	11.130	.9259	11.599	.9444	12.080	.9630	12.574	.9815	13.080	23
24	.9259	11.580	.9444	12.056	.9630	12.543	.9815	13.043	1.0000	13.556	24
25	.9444	12.043	.9630	12.525	.9815	13.019	1.0000	13.525	1.0185	14.043	25
26	.9630	12.519	.9815	13.006	1.0000	13.506	1.0185	14.019	1.0370	14.543	26
27	.9815	13.006	1.0000	13.500	1.0185	14.006	1.0370	14.525	1.0556	15.056	27
28	1.0000	13.506	1.0185	14.006	1.0370	14.519	1.0556	15.043	1.0741	15.580	28
29	1.0185	14.019	1.0370	14.525	1.0556	15.043	1.0741	15.574	1.0926	16.117	29
30	1.0370	14.543	1.0556	15.056	1.0741	15.580	1.0926	16.117	1.1111	16.667	30
31	1.0556	15.080	1.0741	15.599	1.0926	16.130	1.1111	16.673	1.1296	17.228	31
32	1.0741	15.630	1.0926	16.154	1.1111	16.691	1.1296	17.241	1.1481	17.802	32
33	1.0926	16.191	1.1111	16.722	1.1296	17.265	1.1481	17.821	1.1667	18.389	33
34	1.1111	16.765	1.1296	17.302	1.1481	17.852	1.1667	18.414	1.1852	18.988	34
35	1.1296	17.352	1.1481	17.895	1.1667	18.451	1.1852	19.019	1.2047	19.599	35
36	1.1481	17.951	1.1667	18.500	1.1852	19.062	1.2047	19.636	1.2222	20.222	36
37	1.1667	18.562	1.1852	19.117	1.2047	19.685	1.2222	20.265	1.2407	20.858	37
38	1.1852	19.185	1.2047	19.747	1.2222	20.321	1.2407	20.907	1.2593	21.506	38
39	1.2047	19.821	1.2222	20.389	1.2407	20.969	1.2593	21.562	1.2778	22.167	39
40	1.2222	20.469	1.2407	21.045	1.2593	21.630	1.2778	22.228	1.2963	22.840	40
41	1.2407	21.130	1.2593	21.710	1.2778	22.302	1.2963	22.907	1.3148	23.525	41
42	1.2593	21.802	1.2778	22.389	1.2963	22.988	1.3148	23.599	1.3333	24.222	42
43	1.2778	22.488	1.2963	23.080	1.3148	23.685	1.3333	24.302	1.3519	24.932	43
44	1.2963	23.185	1.3148	23.784	1.3333	24.395	1.3519	25.019	1.3704	25.654	44
45	1.3148	23.895	1.3333	24.500	1.3519	25.117	1.3704	25.747	1.3889	26.389	45
46	1.3333	24.617	1.3519	25.228	1.3704	25.852	1.3889	26.488	1.4074	27.136	46
47	1.3519	25.352	1.3704	25.969	1.3889	26.599	1.4074	27.241	1.4259	27.895	47
48	1.3704	26.099	1.3889	26.722	1.4074	27.358	1.4259	28.006	1.4444	28.667	48
49	1.3889	26.858	1.4074	27.488	1.4259	28.130	1.4444	28.784	1.4630	29.451	59
50	1.4074	27.630	1.4259	28.265	1.4444	28.914	1.4630	29.574	1.4815	30.247	40
	26		27		28		29		30		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	5.932	.5926	6.321	.6111	6.722	.6296	7.136	.6481	7.562	0
1	.5926	6.130	.6111	6.525	.6296	6.932	.6481	7.352	.6667	7.784	1
2	.6111	6.340	.6296	6.741	.6481	7.154	.6667	7.580	.6852	8.019	2
3	.6296	6.562	.6481	6.969	.6667	7.389	.6852	7.821	.7037	8.265	3
4	.6481	6.796	.6667	7.210	.6852	7.636	.7037	8.074	.7222	8.525	4
5	.6667	7.043	.6852	7.463	.7037	7.895	.7222	8.340	.7407	8.796	5
6	.6852	7.302	.7037	7.728	.7222	8.167	.7407	8.617	.7593	9.080	6
7	.7037	7.574	.7222	8.006	.7407	8.451	.7593	8.907	.7778	9.377	7
8	.7222	7.858	.7407	8.296	.7593	8.747	.7778	9.210	.7963	9.685	8
9	.7407	8.154	.7593	8.599	.7778	9.056	.7963	9.525	.8148	10.006	9
10	.7593	8.463	.7778	8.914	.7963	9.377	.8148	9.852	.8333	10.340	10
11	.7778	8.784	.7963	9.241	.8148	9.710	.8333	10.191	.8519	10.685	11
12	.7963	9.117	.8148	9.580	.8333	10.056	.8519	10.543	.8704	11.043	12
13	.8148	9.463	.8333	9.932	.8519	10.414	.8704	10.907	.8889	11.414	13
14	.8333	9.821	.8519	10.296	.8704	10.784	.8889	11.284	.9074	11.796	14
15	.8519	10.191	.8704	10.673	.8889	11.167	.9074	11.673	.9259	12.191	15
16	.8704	10.574	.8882	11.062	.9074	11.562	.9259	12.074	.9444	12.599	16
17	.8889	10.969	.9074	11.463	.9259	11.969	.9444	12.488	.9630	13.019	17
18	.9074	11.377	.9259	11.877	.9444	12.389	.9630	12.914	.9815	13.451	18
19	.9259	11.796	.9444	12.302	.9630	12.821	.9815	13.352	1.0000	13.895	19
20	.9444	12.228	.9630	12.741	.9815	13.265	1.0000	13.803	1.0185	14.352	20
21	.9630	12.673	.9815	13.191	1.0000	13.722	1.0185	14.265	1.0370	14.821	21
22	.9815	13.130	1.0000	13.654	1.0185	14.191	1.0370	14.741	1.0556	15.302	22
23	1.0000	13.599	1.0185	14.130	1.0370	14.673	1.0556	15.228	1.0741	15.796	23
24	1.0185	14.080	1.0370	14.617	1.0556	15.167	1.0741	15.728	1.0926	16.302	24
25	1.0370	14.574	1.0556	15.117	1.0741	15.673	1.0926	16.241	1.1111	16.821	25
26	1.0556	15.080	1.0741	15.630	1.0926	16.191	1.1111	16.765	1.1296	17.352	26
27	1.0741	15.599	1.0926	16.154	1.1111	16.722	1.1296	17.302	1.1481	17.895	27
28	1.0926	16.130	1.1111	16.691	1.1296	17.265	1.1481	17.852	1.1667	18.451	28
29	1.1111	16.673	1.1296	17.241	1.1481	17.821	1.1667	18.414	1.1852	19.019	29
30	1.1296	17.228	1.1481	17.802	1.1667	18.389	1.1852	18.988	1.2047	19.599	30
31	1.1481	17.796	1.1667	18.377	1.1852	18.969	1.2047	19.574	1.2222	20.191	31
32	1.1667	18.377	1.1852	18.963	1.2047	19.562	1.2222	20.173	1.2407	20.796	32
33	1.1852	18.969	1.2047	19.562	1.2222	20.167	1.2407	20.784	1.2593	21.414	33
34	1.2047	19.574	1.2222	20.173	1.2407	20.784	1.2593	21.407	1.2778	22.043	34
35	1.2222	20.191	1.2407	20.796	1.2593	21.414	1.2778	22.043	1.2963	22.685	35
36	1.2407	20.821	1.2593	21.432	1.2778	22.056	1.2963	22.691	1.3148	23.340	36
37	1.2593	21.463	1.2778	22.080	1.2963	22.710	1.3148	23.352	1.3333	24.006	37
38	1.2778	22.117	1.2963	22.741	1.3148	23.377	1.3333	24.025	1.3519	24.685	38
39	1.2963	22.784	1.3148	23.414	1.3333	24.056	1.3519	24.710	1.3704	25.377	39
40	1.3148	23.463	1.3333	24.099	1.3519	24.747	1.3704	25.407	1.3889	26.080	40
41	1.3333	24.154	1.3519	24.796	1.3704	25.451	1.3889	26.117	1.4074	26.796	41
42	1.3519	24.858	1.3704	25.506	1.3889	26.167	1.4074	26.840	1.4259	27.525	42
43	1.3704	25.574	1.3889	26.228	1.4074	26.895	1.4259	27.574	1.4444	28.265	43
44	1.3889	26.302	1.4074	26.963	1.4259	27.636	1.4444	28.321	1.4630	29.019	44
45	1.4074	27.043	1.4259	27.710	1.4444	28.389	1.4630	29.080	1.4815	29.784	45
46	1.4259	27.796	1.4444	28.469	1.4630	29.154	1.4815	29.852	1.5000	30.562	46
47	1.4444	28.562	1.4630	29.241	1.4815	29.932	1.5000	30.636	1.5185	31.352	47
48	1.4630	29.340	1.4815	30.025	1.5000	30.722	1.5185	31.432	1.5370	32.154	48
49	1.4815	30.130	1.5000	30.821	1.5185	31.525	1.5370	32.241	1.5556	32.969	49
50	1.5000	30.932	1.5185	31.630	1.5370	32.340	1.5556	33.062	1.5741	33.796	50
	31		32		33		34		35		

TABLE XXIII.—BASE 1—SLOPES ½ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	8.000	.6852	8.451	.7037	8.914	.7222	9.389	.7407	9.877	0
1	.6852	8.228	.7037	8.685	.7222	9.154	.7407	9.636	.7593	10.130	1
2	.7037	8.469	.7222	8.932	.7407	9.407	.7593	9.895	.7778	10.395	2
3	.7222	8.722	.7407	9.191	.7593	9.673	.7778	10.167	.7963	10.673	3
4	.7407	8.988	.7593	9.463	.7778	9.951	.7963	10.451	.8148	10.963	4
5	.7593	9.265	.7778	9.747	.7963	10.241	.8148	10.747	.8333	11.265	5
6	.7778	9.556	.7963	10.043	.8148	10.543	.8333	11.056	.8519	11.580	6
7	.7963	9.858	.8148	10.352	.8333	10.858	.8519	11.377	.8704	11.907	7
8	.8148	10.173	.8333	10.673	.8519	11.185	.8704	11.710	.8889	12.247	8
9	.8333	10.500	.8519	11.006	.8704	11.525	.8889	12.056	.9074	12.599	9
10	.8519	10.840	.8704	11.352	.8889	11.877	.9074	12.414	.9259	12.963	10
11	.8704	11.191	.8889	11.710	.9074	12.241	.9259	12.784	.9444	13.340	11
12	.8889	11.556	.9074	12.080	.9259	12.617	.9444	13.167	.9630	13.728	12
13	.9074	11.932	.9259	12.463	.9444	13.006	.9630	13.562	.9815	14.130	13
14	.9259	12.321	.9444	12.858	.9630	13.407	.9815	13.969	1.0000	14.543	14
15	.9444	12.722	.9630	13.265	.9815	13.821	1.0000	14.389	1.0185	14.969	15
16	.9630	13.136	.9815	13.685	1.0000	14.247	1.0185	14.821	1.0370	15.407	16
17	.9815	13.562	1.0000	14.117	1.0185	14.685	1.0370	15.265	1.0556	15.858	17
18	1.0000	14.000	1.0185	14.562	1.0370	15.136	1.0556	15.722	1.0741	16.321	18
19	1.0185	14.451	1.0370	15.019	1.0556	15.599	1.0741	16.191	1.0926	16.796	19
20	1.0370	14.914	1.0556	15.488	1.0741	16.074	1.0926	16.673	1.1111	17.284	20
21	1.0556	15.389	1.0741	15.969	1.0926	16.562	1.1111	17.167	1.1296	17.784	21
22	1.0741	15.877	1.0926	16.463	1.1111	17.062	1.1296	17.673	1.1481	18.296	22
23	1.0926	16.377	1.1111	16.969	1.1296	17.574	1.1481	18.191	1.1667	18.821	23
24	1.1111	16.889	1.1296	17.488	1.1481	18.099	1.1667	18.722	1.1852	19.358	24
25	1.1296	17.414	1.1481	18.019	1.1667	18.636	1.1852	19.265	1.2047	19.907	25
26	1.1481	17.951	1.1667	18.562	1.1852	19.185	1.2047	19.821	1.2222	20.469	26
27	1.1667	18.500	1.1852	19.117	1.2047	19.747	1.2222	20.389	1.2407	21.043	27
28	1.1852	19.062	1.2047	19.685	1.2222	20.321	1.2407	20.969	1.2593	21.630	28
29	1.2047	19.636	1.2222	20.265	1.2407	20.907	1.2593	21.562	1.2778	22.228	29
30	1.2222	20.222	1.2407	20.858	1.2593	21.506	1.2778	22.167	1.2963	22.840	30
31	1.2407	20.821	1.2593	21.463	1.2778	22.117	1.2963	22.784	1.3148	23.463	31
32	1.2593	21.432	1.2778	22.080	1.2963	22.741	1.3148	23.414	1.3333	24.099	32
33	1.2778	22.056	1.2963	22.710	1.3148	23.377	1.3333	24.056	1.3519	24.747	33
34	1.2963	22.691	1.3148	23.352	1.3333	24.025	1.3519	24.710	1.3704	25.407	34
35	1 3148	23.340	1.3333	24.006	1.3519	24.685	1.3704	25.377	1.3889	26.080	35
36	1.3333	24.000	1.3519	24.673	1.3704	25.358	1.3889	26.056	1.4074	26.765	36
37	1.3519	24.673	1.3704	25.352	1.3889	26.043	1.4074	26.747	1.4259	27.463	37
38	1.3704	25.358	1.3889	26.043	1.4074	26.741	1.4259	27.451	1.4444	28.173	38
39	1.3889	26.056	1.4074	26.747	1.4259	27.451	1.4444	28.167	1.4630	28.895	39
40	1.4074	26.765	1.4259	27.463	1.4444	28.173	1.4630	28.895	1.4815	29.630	40
41	1.4259	27.488	1.4444	28.191	1.4630	28.907	1.4815	29.636	1.5000	30.377	41
42	1.4444	28.222	1.4630	28.932	1.4815	29.654	1.5000	30.389	1.5185	31.136	42
43	1.4630	28.969	1.4815	29.685	1.5000	30.414	1.5185	31.154	1.5370	31.907	43
44	1.4815	29.728	1.5000	30.451	1.5185	31.185	1.5370	31.932	1.5556	32.691	44
45	1.5000	30.500	1.5185	31.228	1.5370	31.969	1.5556	32.722	1.5741	33.488	45
46	1.5185	31.284	1.5370	32.019	1.5556	32.765	1.5741	33.525	1.5926	34.296	46
47	1.5370	32.080	1.5556	32.821	1.5741	33.574	1.5926	34.340	1.6111	35.117	47
48	1.5556	32.839	1.5741	33.636	1.5926	34.395	1.6111	35.167	1.6296	35.951	48
49	1.5741	33.710	1.5926	34.463	1.6111	35.228	1.6296	36.006	1.6481	36.796	49
50	1.5926	34.543	1.6111	35.302	1.6296	36.074	1.6481	36.858	1.6667	37.654	50
	36		37		38		39		40		

TABLE XXIII.—BASE I—SLOPES ½ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	10.377	.7778	10.889	.7963	11.414	.8148	11.951	.8333	12.500	0
1	.7778	10.636	.7963	11.154	.8148	11.685	.8333	12.228	.8519	12.784	1
2	.7963	10.907	.8148	11.432	.8333	11.969	.8519	12.519	.8704	13.080	2
3	.8148	11.191	.8333	11.722	.8519	12.265	.8704	12.821	.8889	13.389	3
4	.8333	11.488	.8519	12.025	.8704	12.574	.8889	13.136	.9074	13.710	4
5	.8519	11.796	.8704	12.340	.8889	12.895	.9074	13.463	.9259	14.043	5
6	.8704	12.117	.8889	12.667	.9074	13.228	.9259	13.802	.9444	14.389	6
7	.8889	12.451	.9074	13.006	.9259	13.574	.9444	14.154	.9630	14.747	7
8	.9074	12.796	.9259	13.358	.9444	13.932	.9630	14.519	.9815	15.117	8
9	.9259	13.154	.9444	13.722	.9630	14.302	.9815	14.895	1.0000	15.500	9
10	.9444	13.525	.9630	14.099	.9815	14.685	1.0000	15.284	1.0185	15.895	10
11	.9630	13.907	.9815	14.488	1.0000	15.080	1.0185	15.685	1.0370	16.302	11
12	.9815	14.302	1.0000	14.889	1.0185	15.488	1.0370	16.099	1.0556	16.722	12
13	1.0000	14.710	1.0185	15.302	1.0370	15.907	1.0556	16.525	1.0741	17.154	13
14	1.0185	15.130	1.0370	15.728	1.0556	16.340	1.0741	16.963	1.0926	17.599	14
15	1.0370	15.562	1.0556	16.167	1.0741	16.784	1.0926	17.414	1.1111	18.056	15
16	1.0556	16.006	1.0741	16.617	1.0926	17.241	1.1111	17.877	1.1296	18.525	16
17	1.0741	16.463	1.0926	17.080	1.1111	17.710	1.1296	18.352	1.1481	19.006	17
18	1.0926	16.932	1.1111	17.556	1.1296	18.191	1.1481	18.840	1.1667	19.500	18
19	1.1111	17.414	1.1296	18.043	1.1481	18.685	1.1667	19.340	1.1852	20.006	19
20	1.1296	17.907	1.1481	18.543	1.1667	19.191	1.1852	19.852	1.2047	20.525	20
21	1.1481	18.414	1.1667	19.056	1.1852	19.710	1.2047	20.377	1.2222	21.056	21
22	1.1667	18.932	1.1852	19.580	1.2047	20.241	1.2222	20.914	1.2407	21.599	22
23	1.1852	19.463	1.2047	20.117	1.2222	20.784	1.2407	21.463	1.2593	22.154	23
24	1.2047	20.006	1.2222	20.667	1.2407	21.340	1.2593	22.025	1.2778	22.722	24
25	1.2222	20.562	1.2407	21.228	1.2593	21.907	1.2778	22.599	1.2963	23.302	25
26	1.2407	21.130	1.2593	21.802	1.2778	22.488	1.2963	23.185	1.3148	23.895	26
27	1.2593	21.710	1.2778	22.389	1.2963	23.080	1.3148	23.784	1.3333	24.500	27
28	1.2778	22.302	1.2963	22.988	1.3148	23.685	1.3333	24.395	1.3519	25.117	28
29	1.2963	22.907	1.3148	23.599	1.3333	24.302	1.3519	25.019	1.3704	25.747	29
30	1.3148	23.525	1.3333	24.222	1.3519	24.932	1.3704	25.654	1.3889	26.389	30
31	1.3333	24.154	1.3519	24.858	1.3704	25.574	1.3889	26.302	1.4074	27.043	31
32	1.3519	24.796	1.3704	25.506	1.3889	26.228	1.4074	26.963	1.4259	27.710	32
33	1.3704	25.451	1.3889	26.167	1.4074	26.895	1.4259	27.636	1.4444	28.389	33
34	1.3889	26.117	1.4074	26.840	1.4259	27.574	1.4444	28.321	1.4630	29.080	34
35	1.4074	26.796	1.4259	27.525	1.4444	28.265	1.4630	29.019	1.4815	29.784	35
36	1.4259	27.488	1.4444	28.222	1.4630	28.969	1.4815	29.728	1.5000	30.500	36
37	1.4444	28.191	1.4630	28.932	1.4815	29.685	1.5000	30.451	1.5185	31.228	37
38	1.4630	28.907	1.4815	29.654	1.5000	30.414	1.5185	31.185	1.5370	31.969	38
39	1.4815	29.636	1.5000	30.389	1.5185	31.154	1.5370	31.932	1.5556	32.722	39
40	1.5000	30.377	1.5185	31.136	1.5370	31.907	1.5556	32.691	1.5741	33.488	40
41	1.5185	31.130	1.5370	31.895	1.5556	32.673	1.5741	33.463	1.5926	34.265	41
42	1.5370	31.895	1.5556	32.667	1.5741	33.451	1.5926	34.247	1.6111	35.056	42
43	1.5556	32.673	1.5741	33.451	1.5926	34.241	1.6111	35.043	1.6296	35.858	43
44	1.5741	33.463	1.5926	34.247	1.6111	35.043	1.6296	35.852	1.6481	36.673	44
45	1.5926	34.265	1.6111	35.056	1.6296	35.858	1.6481	36.673	1.6667	37.500	45
46	1.6111	35.080	1.6296	35.877	1.6481	36.685	1.6667	37.506	1.6852	38.340	46
47	1.6296	35.907	1.6481	36.710	1.6667	37.525	1.6852	38.352	1.7037	39.191	47
48	1.6481	36.747	1.6667	37.556	1.6852	38.377	1.7037	39.210	1.7222	40.056	48
49	1.6667	37.599	1.6852	38.414	1.7037	39.241	1.7222	40.080	1.7407	40.932	49
50	1.6852	38.463	1.7037	39.284	1.7222	40.117	1.7407	40.963	1.7593	41.821	50
	41		42		43		44		45		

TABLE XXIII.—BASE I—SLOPES ½ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	13.062	.8704	13.636	.8889	14.222	.9074	14.821	.9259	15.432	0
1	.8704	13.352	.8889	13.932	.9074	14.525	.9259	15.130	.9444	15.747	1
2	.8889	13.654	.9074	14.241	.9259	14.840	.9444	15.451	.9630	16.074	2
3	.9074	13.969	.9259	14.562	.9444	15.167	.9630	15.784	.9815	16.414	3
4	.9259	14.296	.9444	14.895	.9630	15.506	.9815	16.160	1.0000	16.765	4
5	.9444	14.636	.9630	15.241	.9815	15.858	1.0000	16.488	1.0185	17.130	5
6	.9630	14.988	.9815	15.599	1.0000	16.222	1.0185	16.858	1.0370	17.506	6
7	.9815	15.352	1.0000	15.969	1.0185	16.599	1.0370	17.241	1.0556	17.895	7
8	1.0000	15.728	1.0185	16.352	1.0370	16.998	1.0556	17.636	1.0741	18.296	8
9	1.0185	16.117	1.0370	16.747	1.0556	17.389	1.0741	18.043	1.0926	18.710	9
10	1.0370	16.519	1.0556	17.154	1.0741	17.802	1.0926	18.463	1.1111	19.136	10
11	1.0556	16.932	1.0741	17.574	1.0926	18.228	1.1111	18.895	1.1296	19.574	11
12	1.0741	17.358	1.0926	18.006	1.1111	18.667	1.1296	19.340	1.1481	20.025	12
13	1.0926	17.796	1.1111	18.451	1.1296	19.117	1.1481	19.796	1.1667	20.488	13
14	1.1111	18.247	1.1296	18.907	1.1481	19.580	1.1667	20.265	1.1852	20.963	14
15	1.1296	18.710	1.1481	19.377	1.1667	20.056	1.1852	20.747	1.2047	21.451	15
16	1.1481	19.185	1.1667	19.858	1.1852	20.543	1.2047	21.241	1.2222	21.951	16
17	1.1667	19.673	1.1852	20.352	1.2047	21.043	1.2222	21.747	1.2407	22.463	17
18	1.1852	20.173	1.2047	20.858	1.2222	21.556	1.2407	22.265	1.2593	22.988	18
19	1.2047	20.685	1.2222	21.377	1.2407	22.080	1.2593	22.796	1.2778	23.525	19
20	1.2222	21.210	1.2407	21.907	1.2593	22.617	1.2778	23.340	1.2963	24.074	20
21	1.2407	21.747	1.2593	22.451	1.2778	23.167	1.2963	23.895	1.3148	24.636	21
22	1.2593	22.296	1.2778	23.006	1.2963	23.728	1.3148	24.463	1.3333	25.210	22
23	1.2778	22.858	1.2963	23.574	1.3148	24.302	1.3333	25.043	1.3519	25.796	23
24	1.2963	23.432	1.3148	24.154	1.3333	24.889	1.3519	25.636	1.3704	26.395	24
25	1.3148	24.019	1.3333	24.747	1.3519	25.488	1.3704	26.241	1.3889	27.006	25
26	1.3333	24.617	1.3519	25.352	1.3704	26.099	1.3889	26.858	1.4074	27.630	26
27	1.3519	25.228	1.3704	25.969	1.3889	26.722	1.4074	27.488	1.4259	28.265	27
28	1.3704	25.852	1.3889	26.599	1.4074	27.358	1.4259	28.130	1.4444	28.914	28
29	1.3889	26.488	1.4074	27.241	1.4259	28.006	1.4444	28.784	1.4630	29.574	29
30	1.4074	27.136	1.4259	27.895	1.4444	28.667	1.4630	29.451	1.4815	30.247	30
31	1.4259	27.796	1.4444	28.562	1.4630	29.340	1.4815	30.130	1.5000	30.932	31
32	1.4444	28.469	1.4630	29.241	1.4815	30.025	1.5000	30.821	1.5185	31.630	32
33	1.4630	29.154	1.4815	29.932	1.5000	30.722	1.5185	31.525	1.5370	32.340	33
34	1.4815	29.852	1.5000	30.636	1.5185	31.432	1.5370	32.241	1.5556	33.062	34
35	1.5000	30.562	1.5185	31.352	1.5370	32.154	1.5556	32.969	1.5741	33.796	35
36	1.5185	31.284	1.5370	32.080	1.5556	32.889	1.5741	33.710	1.5926	34.543	36
37	1.5370	32.019	1.5556	32.821	1.5741	33.636	1.5926	34.463	1.6111	35.302	37
38	1.5556	32.765	1.5741	33.574	1.5926	34.395	1.6111	35.228	1.6296	36.074	38
39	1.5741	33.525	1.5926	34.340	1.6111	35.167	1.6296	36.006	1.6481	36.858	39
40	1.5926	34.296	1.6111	35.117	1.6296	35.951	1.6481	36.796	1.6667	37.654	40
41	1.6111	35.080	1.6296	35.907	1.6481	36.747	1.6667	37.599	1.6852	38.463	41
42	1.6296	35.877	1.6481	36.710	1.6667	37.556	1.6852	38.414	1.7037	39.284	42
43	1.6481	36.685	1.6667	37.525	1.6852	38.377	1.7037	39.241	1.7222	40.117	43
44	1.6667	37.506	1.6852	38.352	1.7037	39.210	1.7222	40.080	1.7407	40.963	44
45	1.6852	38.340	1.7037	39.191	1.7222	40.056	1.7407	40.932	1.7593	41.821	45
46	1.7037	39.185	1.7222	40.043	1.7407	40.914	1.7593	41.796	1.7778	42.691	46
47	1.7222	40.043	1.7407	40.907	1.7593	41.784	1.7778	42.673	1.7963	43.574	47
48	1.7407	40.914	1.7593	41.784	1.7778	42.667	1.7963	43.562	1.8148	44.469	48
49	1.7593	41.796	1.7778	42.673	1.7963	43.562	1.8148	44.463	1.8333	45.377	49
50	1.7778	42.691	1.7963	43.574	1.8148	44.469	1.8333	45.377	1.8519	46.296	50
	46		47		48		49		50		

TABLE XXIV.—BASE 1—SLOPES $\frac{3}{4}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	.009	.0370	.037	.0556	.083	.0741	.148	.0926	.231	0
1	.0370	.028	.0556	.065	.0741	.120	.0926	.194	.1111	.287	1
2	.0556	.065	.0741	.111	.0926	.176	.1111	.259	.1296	.361	2
3	.0741	.120	.0926	.176	.1111	.250	.1296	.343	.1481	.454	3
4	.0926	.194	.1111	.259	.1296	.343	.1481	.444	.1667	.565	4
5	.1111	.287	.1296	.361	.1481	.454	.1667	.565	.1852	.694	5
6	.1296	.398	.1481	.481	.1667	.583	.1852	.704	.2047	.843	6
7	.1481	.528	.1667	.620	.1852	.731	.2047	.861	.2222	1.009	7
8	.1667	.676	.1852	.778	.2047	.898	.2222	1.037	.2407	1.194	8
9	.1852	.843	.2047	.954	.2222	1.083	.2407	1.231	.2593	1.398	9
10	.2047	1.028	.2222	1.148	.2407	1.287	.2593	1.444	.2778	1.620	10
11	.2222	1.231	.2407	1.361	.2593	1.509	.2778	1.676	.2963	1.861	11
12	.2407	1.454	.2593	1.593	.2778	1.750	.2963	1.926	.3148	2.120	12
13	.2593	1.694	.2778	1.843	.2963	2.009	.3148	2.194	.3333	2.398	13
14	.2778	1.954	.2963	2.111	.3148	2.287	.3333	2.481	.3519	2.694	14
15	.2963	2.231	.3148	2.398	.3333	2.583	.3519	2.787	.3704	3.009	15
16	.3148	2.528	.3333	2.704	.3519	2.898	.3704	3.111	.3889	3.343	16
17	.3333	2.843	.3519	3.028	.3704	3.231	.3889	3.454	.4074	3.694	17
18	.3519	3.176	.3704	3.370	.3889	3.583	.4074	3.815	.4259	4.065	18
19	.3704	3.528	.3889	3.731	.4074	3.954	.4259	4.194	.4444	4.454	19
20	.3889	3.898	.4074	4.111	.4259	4.343	.4444	4.593	.4630	4.861	20
21	.4074	4.287	.4259	4.509	.4444	4.750	.4630	5.009	.4815	5.287	21
22	.4259	4.694	.4444	4.926	.4630	5.176	.4815	5.444	.5000	5.731	22
23	.4444	5.120	.4630	5.361	.4815	5.620	.5000	5.898	.5185	6.194	23
24	.4630	5.565	.4815	5.815	.5000	6.083	.5185	6.370	.5370	6.676	24
25	.4815	6.028	.5000	6.287	.5185	6.565	.5370	6.861	.5556	7.176	25
26	.5000	6.509	.5185	6.778	.5370	7.065	.5556	7.370	.5741	7.694	26
27	.5185	7.009	.5370	7.287	.5556	7.583	.5741	7.898	.5926	8.231	27
28	.5370	7.528	.5556	7.815	.5741	8.120	.5926	8.444	.6111	8.787	28
29	.5556	8.065	.5741	8.361	.5926	8.676	.6111	9.009	.6296	9.361	29
30	.5741	8.620	.5926	8.926	.6111	9.250	.6296	9.593	.6481	9.954	30
31	.5926	9.194	.6111	9.509	.6296	9.843	.6481	10.194	.6667	10.565	31
32	.6111	9.787	.6296	10.111	.6481	10.454	.6667	10.815	.6852	11.194	32
33	.6296	10.398	.6481	10.731	.6667	11.083	.6852	11.454	.7037	11.843	33
34	.6481	11.028	.6667	11.370	.6852	11.731	.7037	12.111	.7222	12.509	34
35	.6667	11.676	.6852	12.028	.7037	12.398	.7222	12.787	.7407	13.194	35
36	.6852	12.343	.7037	12.704	.7222	13.083	.7407	13.481	.7593	13.898	36
37	.7037	13.028	.7222	13.398	.7407	13.787	.7593	14.194	.7778	14.620	37
38	.7222	13.731	.7407	14.111	.7593	14.509	.7778	14.926	.7963	15.361	38
39	.7407	14.454	.7593	14.843	.7778	15.250	.7963	15.676	.8148	16.120	39
40	.7593	15.194	.7778	15.593	.7963	16.009	.8148	16.444	.8333	16.898	40
41	.7778	15.954	.7963	16.361	.8148	16.787	.8333	17.231	.8519	17.694	41
42	.7963	16.731	.8148	17.148	.8333	17.583	.8519	18.037	.8704	18.509	42
43	.8148	17.528	.8333	17.954	.8519	18.398	.8704	18.861	.8889	19.343	43
44	.8333	18.343	.8519	18.778	.8704	19.231	.8889	19.704	.9074	20.194	44
45	.8519	19.176	.8704	19.620	.8889	20.083	.9074	20.565	.9259	21.065	45
46	.8704	20.028	.8889	20.481	.9074	20.954	.9259	21.444	.9444	21.954	46
47	.8889	20.898	.9074	21.361	.9259	21.843	.9444	22.343	.9630	22.861	47
48	.9074	21.787	.9259	22.259	.9444	22.750	.9630	23.259	.9815	23.787	48
49	.9259	22.694	.9444	23.176	.9630	23.676	.9815	24.194	1.0000	24.731	49
50	.9444	23.620	.9630	24.111	.9815	24.620	1.0000	25.148	1.0185	25.694	50
	1		2		3		4		5		

TABLE XXIV.—BASE 1—SLOPES ¾ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	.333	.1296	.454	.1481	.593	.1667	.750	.1852	.926	0
1	.1296	.398	.1481	.528	.1667	.676	.1852	.843	.2047	1.028	1
2	.1481	.431	.1667	.620	.1852	.778	.2047	.954	.2222	1.148	2
3	.1667	.583	.1852	.731	.2047	.898	.2222	1.083	.2407	1.287	3
4	.1852	.704	.2047	.861	.2222	1.037	.2407	1.231	.2593	1.444	4
5	.2047	.843	.2222	1.009	.2407	1.194	.2593	1.398	.2778	1.620	5
6	.2222	1.000	.2407	1.176	.2593	1.370	.2778	1.583	.2963	1.815	6
7	.2407	1.176	.2593	1.361	.2778	1.565	.2963	1.787	.3148	2.028	7
8	.2593	1.370	.2778	1.565	.2963	1.778	.3148	2.009	.3333	2.259	8
9	.2778	1.583	.2963	1.787	.3148	2.009	.3333	2.250	.3519	2.509	9
10	.2963	1.815	.3148	2.028	.3333	2.259	.3519	2.509	.3704	2.778	10
11	.3148	2.065	.3333	2.287	.3519	2.528	.3704	2.787	.3889	3.065	11
12	.3333	2.333	.3519	2.565	.3704	2.815	.3889	3.083	.4074	3.370	12
13	.3519	2.620	.3704	2.861	.3889	3.120	.4074	3.398	.4259	3.694	13
14	.3704	2.926	.3889	3.176	.4074	3.444	.4259	3.731	.4444	4.037	14
15	.3889	3.250	.4074	3.509	.4259	3.787	.4444	4.083	.4630	4.398	15
16	.4074	3.593	.4259	3.861	.4444	4.148	.4630	4.454	.4815	4.778	16
17	.4259	3.954	.4444	4.232	.4630	4.528	.4815	4.843	.5000	5.176	17
18	.4444	4.333	.4630	4.620	.4815	4.926	.5000	5.250	.5185	5.593	18
19	.4630	4.731	.4815	5.028	.5000	5.343	.5185	5.676	.5370	6.028	19
20	.4815	5.148	.5000	5.454	.5185	5.778	.5370	6.120	.5556	6.481	20
21	.5000	5.583	.5185	5.898	.5370	6.231	.5556	6.583	.5741	6.954	21
22	.5185	6.037	.5370	6.361	.5556	6.704	.5741	7.065	.5926	7.444	22
23	.5370	6.509	.5556	6.843	.5741	7.194	.5926	7.565	.6111	7.954	23
24	.5556	7.000	.5741	7.343	.5926	7.704	.6111	8.083	.6296	8.481	24
25	.5741	7.509	.5926	7.861	.6111	8.231	.6296	8.620	.6481	9.028	25
26	.5926	8.037	.6111	8.398	.6296	8.778	.6481	9.176	.6667	9.593	26
27	.6111	8.583	.6296	8.954	.6481	9.343	.6667	9.750	.6852	10.176	27
28	.6296	9.148	.6481	9.528	.6667	9.926	.6852	10.343	.7037	10.778	28
29	.6481	9.731	.6667	10.120	.6852	10.528	.7037	10.954	.7222	11.398	29
30	.6667	10.333	.6852	10.732	.7037	11.148	.7222	11.583	.7407	12.037	30
31	.6852	10.954	.7037	11.361	.7222	11.787	.7407	12.231	.7593	12.694	31
32	.7037	11.593	.7222	12.009	.7407	12.444	.7593	12.898	.7778	13.370	32
33	.7222	12.250	.7407	12.676	.7593	13.120	.7778	13.583	.7963	14.065	33
34	.7407	12.926	.7593	13.361	.7778	13.815	.7963	14.287	.8148	14.778	34
35	.7593	13.620	.7778	14.065	.7963	14.528	.8148	15.009	.8333	15.509	35
36	.7778	14.333	.7963	14.787	.8148	15.259	.8333	15.750	.8519	16.259	36
37	.7963	15.065	.8148	15.528	.8333	16.009	.8519	16.509	.8704	17.028	37
38	.8148	15.815	.8333	16.287	.8519	16.778	.8704	17.287	.8889	17.815	38
39	.8333	16.583	.8519	17.065	.8704	17.565	.8889	18.083	.9074	18.620	39
40	.8519	17.370	.8704	17.861	.8889	18.370	.9074	18.898	.9259	19.444	40
41	.8704	18.176	.8889	18.676	.9074	19.194	.9259	19.731	.9444	20.287	41
42	.8889	19.000	.9074	19.509	.9259	20.037	.9444	20.583	.9630	21.148	42
43	.9074	19.843	.9259	20.361	.9444	20.898	.9630	21.454	.9815	22.028	43
44	.9259	20.704	.9444	21.232	.9630	21.778	.9815	22.343	1.0000	22.926	44
45	.9444	21.583	.9630	22.120	.9815	22.676	1.0000	23.250	1.0185	23.843	45
46	.9630	22.481	.9815	23.028	1.0000	23.593	1.0185	24.176	1.0370	24.778	46
47	.9815	23.398	1.0000	23.954	1.0185	24.528	1.0370	25.120	1.0556	25.731	47
48	1.0000	24.333	1.0185	24.898	1.0370	25.481	1.0556	26.083	1.0741	26.704	48
49	1.0185	25.287	1.0370	25.861	1.0556	26.454	1.0741	27.065	1.0926	27.694	49
50	1.0370	26.259	1.0556	26.843	1.0741	27.444	1.0926	28.065	1.1111	28.704	50
	6		7		8		9		10		

TABLE XXIV.—BASE 1—SLOPES $\frac{3}{4}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	1.120	.2222	1.333	.2407	1.565	.2593	1.815	.2778	2.083	0
1	.2222	1.231	.2407	1.454	.2593	1.694	.2778	1.954	.2963	2.231	1
2	.2407	1.361	.2593	1.593	.2778	1.843	.2963	2.111	.3148	2.398	2
3	.2593	1.509	.2778	1.750	.2963	2.009	.3148	2.287	.3333	2.583	3
4	.2778	1.676	.2963	1.926	.3148	2.194	.3333	2.481	.3519	2.787	4
5	.2963	1.861	.3148	2.120	.3333	2.398	.3519	2.694	.3704	3.009	5
6	.3148	2.065	.3333	2.333	.3519	2.620	.3704	2.926	.3889	3.250	6
7	.3333	2.287	.3519	2.565	.3704	2.861	.3889	3.176	.4074	3.509	7
8	.3519	2.528	.3704	2.815	.3889	3.120	.4074	3.444	.4259	3.787	8
9	.3704	2.787	.3889	3.083	.4074	3.398	.4259	3.731	.4444	4.083	9
10	.3889	3.065	.4074	3.370	.4259	3.694	.4444	4.037	.4630	4.398	10
11	.4074	3.361	.4259	3.676	.4444	4.009	.4630	4.361	.4815	4.731	11
12	.4259	3.676	.4444	4.000	.4630	4.343	.4815	4.704	.5000	5.083	12
13	.4444	4.009	.4630	4.343	.4815	4.694	.5000	5.065	.5185	5.454	13
14	.4630	4.361	.4815	4.704	.5000	5.065	.5185	5.444	.5370	5.843	14
15	.4815	4.731	.5000	5.083	.5185	5.454	.5370	5.843	.5556	6.250	15
16	.5000	5.120	.5185	5.481	.5370	5.861	.5556	6.259	.5741	6.676	16
17	.5185	5.528	.5370	5.898	.5556	6.287	.5741	6.694	.5926	7.120	17
18	.5370	5.954	.5556	6.333	.5741	6.731	.5926	7.148	.6111	7.583	18
19	.5556	6.398	.5741	6.787	.5926	7.194	.6111	7.620	.6296	8.065	19
20	.5741	6.861	.5926	7.259	.6111	7.676	.6296	8.111	.6481	8.565	20
21	.5926	7.343	.6111	7.750	.6296	8.176	.6481	8.620	.6667	9.083	21
22	.6111	7.843	.6296	8.259	.6481	8.694	.6667	9.148	.6852	9.620	22
23	.6296	8.361	.6481	8.787	.6667	9.231	.6852	9.694	.7037	10.176	23
24	.6481	8.898	.6667	9.333	.6852	9.787	.7037	10.259	.7222	10.750	24
25	.6667	9.454	.6852	9.898	.7037	10.361	.7222	10.843	.7407	11.343	25
26	.6852	10.028	.7037	10.481	.7222	10.954	.7407	11.444	.7593	11.954	26
27	.7037	10.620	.7222	11.083	.7407	11.565	.7593	12.065	.7778	12.583	27
28	.7222	11.231	.7407	11.704	.7593	12.194	.7778	12.704	.7963	13.231	28
29	.7407	11.861	.7593	12.343	.7778	12.843	.7963	13.361	.8148	13.898	29
30	.7593	12.509	.7778	13.000	.7963	13.509	.8148	14.037	.8333	14.583	30
31	.7778	13.176	.7963	13.676	.8148	14.194	.8333	14.731	.8519	15.287	31
32	.7963	13.861	.8148	14.370	.8333	14.898	.8519	15.444	.8704	16.009	32
33	.8148	14.565	.8333	15.083	.8519	15.620	.8704	16.176	.8889	16.750	33
34	.8333	15.287	.8519	15.815	.8704	16.361	.8889	16.926	.9074	17.509	34
35	.8519	16.028	.8704	16.565	.8889	17.120	.9074	17.694	.9259	18.287	35
36	.8704	16.787	.8889	17.333	.9074	17.898	.9259	18.481	.9444	19.083	36
37	.8889	17.565	.9074	18.120	.9259	18.694	.9444	19.287	.9630	19.898	37
38	.9074	18.361	.9259	18.926	.9444	19.509	.9630	20.111	.9815	20.731	38
39	.9259	19.176	.9444	19.750	.9630	20.343	.9815	20.954	1.0000	21.583	39
40	.9444	20.009	.9630	20.593	.9815	21.194	1.0000	21.815	1.0185	22.453	40
41	.9630	20.861	.9815	21.454	1.0000	22.065	1.0185	22.694	1.0370	23.343	41
42	.9815	21.731	1.0000	22.333	1.0185	22.954	1.0370	23.593	1.0556	24.250	42
43	1.0000	22.620	1.0185	23.231	1.0370	23.861	1.0556	24.509	1.0741	25.176	43
44	1.0185	23.528	1.0370	24.148	1.0556	24.787	1.0741	25.444	1.0926	26.120	44
45	1.0370	24.454	1.0556	25.083	1.0741	25.731	1.0926	26.398	1.1111	27.083	45
46	1.0556	25.398	1.0741	26.037	1.0926	26.694	1.1111	27.370	1.1296	28.065	46
47	1.0741	26.361	1.0926	27.009	1.1111	27.676	1.1296	28.361	1.1481	29.065	47
48	1.0926	27.343	1.1111	28.000	1.1296	28.676	1.1481	29.370	1.1667	30.083	48
49	1.1111	28.343	1.1296	29.009	1.1481	29.694	1.1667	30.398	1.1852	31.120	49
50	1.1296	29.361	1.1481	30.037	1.1667	30.731	1.1852	31.444	1.2047	32.176	50
	11		12		13		14		15		

TABLE XXIV.—BASE 1—SLOPES $\frac{3}{4}$ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	2.370	.3148	2.676	.3333	3.000	.3519	3.343	.3704	3.704	0
1	.3148	2.528	.3333	2.843	.3519	3.176	.3704	3.528	.3889	3.898	1
2	.3333	2.704	.3519	3.028	.3704	3.370	.3889	3.731	.4074	4.111	2
3	.3519	2.898	.3704	3.231	.3889	3.583	.4074	3.954	.4259	4.343	3
4	.3704	3.111	.3889	3.454	.4074	3.815	.4259	4.194	.4444	4.593	4
5	.3889	3.343	.4074	3.694	.4259	4.065	.4444	4.454	.4630	4.861	5
6	.4074	3.593	.4259	3.954	.4444	4.333	.4630	4.731	.4815	5.148	6
7	.4259	3.861	.4444	4.232	.4630	4.620	.4815	5.028	.5000	5.454	7
8	.4444	4.148	.4630	4.528	.4815	4.926	.5000	5.343	.5185	5.778	8
9	.4630	4.454	.4815	4.843	.5000	5.250	.5185	5.676	.5370	6.120	9
10	.4815	4.778	.5000	5.176	.5185	5.593	.5370	6.028	.5556	6.481	10
11	.5000	5.120	.5185	5.528	.5370	5.954	.5556	6.398	.5741	6.861	11
12	.5185	5.481	.5370	5.898	.5556	6.333	.5741	6.787	.5926	7.259	12
13	.5370	5.861	.5556	6.287	.5741	6.731	.5926	7.194	.6111	7.676	13
14	.5556	6.259	.5741	6.694	.5926	7.148	.6111	7.620	.6296	8.111	14
15	.5741	6.676	.5926	7.120	.6111	7.583	.6296	8.065	.6481	8.565	15
16	.5926	7.111	.6111	7.565	.6296	8.037	.6481	8.528	.6667	9.037	16
17	.6111	7.565	.6296	8.028	.6481	8.509	.6667	9.009	.6852	9.528	17
18	.6296	8.037	.6481	8.509	.6667	9.000	.6852	9.509	.7037	10.037	18
19	.6481	8.528	.6667	9.009	.6852	9.509	.7037	10.028	.7222	10.565	19
20	.6667	9.037	.6852	9.528	.7037	10.037	.7222	10.565	.7407	11.111	20
21	.6852	9.565	.7037	10.065	.7222	10.583	.7407	11.120	.7593	11.676	21
22	.7037	10.111	.7222	10.620	.7407	11.148	.7593	11.694	.7778	12.259	22
23	.7222	10.676	.7407	11.194	.7593	11.731	.7778	12.287	.7963	12.861	23
24	.7407	11.259	.7593	11.787	.7778	12.333	.7963	12.898	.8148	13.481	24
25	.7593	11.861	.7778	12.398	.7963	12.954	.8148	13.528	.8333	14.120	25
26	.7778	12.481	.7963	13.028	.8148	13.593	.8333	14.176	.8519	14.778	26
27	.7963	13.120	.8148	13.676	.8333	14.250	.8519	14.843	.8704	15.454	27
28	.8148	13.778	.8333	14.343	.8519	14.926	.8704	15.528	.8889	16.148	28
29	.8333	14.454	.8519	15.028	.8704	15.620	.8889	16.231	.9074	16.861	29
30	.8519	15.148	.8704	15.732	.8889	16.333	.9074	16.954	.9259	17.593	30
31	.8704	15.861	.8889	16.454	.9074	17.065	.9259	17.694	.9444	18.343	31
32	.8889	16.593	.9074	17.194	.9259	17.815	.9444	18.454	.9630	19.111	32
33	.9074	17.343	.9259	17.954	.9444	18.583	.9630	19.231	.9815	19.898	33
34	.9259	18.111	.9444	18.731	.9630	19.370	.9815	20.028	1.0000	20.704	34
35	.9444	18.898	.9630	19.528	.9815	20.176	1.0000	20.843	1.0185	21.528	35
36	.9630	19.704	.9815	20.343	1.0000	21.000	1.0185	21.676	1.0370	22.370	36
37	.9815	20.528	1.0000	21.176	1.0185	21.843	1.0370	22.528	1.0556	23.231	37
38	1.0000	21.370	1.0185	22.028	1.0370	22.704	1.0556	23.398	1.0741	24.111	38
39	1.0185	22.231	1.0370	22.898	1.0556	23.583	1.0741	24.287	1.0926	25.009	39
40	1.0370	23.111	1.0556	23.787	1.0741	24.481	1.0926	25.194	1.1111	25.926	40
41	1.0556	24.009	1.0741	24.694	1.0926	25.398	1.1111	26.120	1.1296	26.861	41
42	1.0741	24.926	1.0926	25.620	1.1111	26.333	1.1296	27.065	1.1481	27.815	42
43	1.0926	25.861	1.1111	26.565	1.1296	27.287	1.1481	28.028	1.1667	28.787	43
44	1.1111	26.815	1.1296	27.528	1.1481	28.259	1.1667	29.009	1.1852	29.778	44
45	1.1296	27.787	1.1481	28.509	1.1667	29.250	1.1852	30.009	1.2047	30.787	45
46	1.1481	28.778	1.1667	29.509	1.1852	30.259	1.2047	31.028	1.2222	31.815	46
47	1.1667	29.787	1.1852	30.528	1.2047	31.287	1.2222	32.065	1.2407	32.861	47
48	1.1852	30.815	1.2047	31.565	1.2222	32.333	1.2407	33.120	1.2593	33.926	48
49	1.2047	31.861	1.2222	32.620	1.2407	33.398	1.2593	34.194	1.2778	35.009	49
50	1.2222	32.926	1.2407	33.694	1.2593	34.481	1 2778	35.287	1.2963	36.111	50
	16		17		18		19		20		

TABLE XXIV.—BASE 1—SLOPES $\frac{3}{4}$ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	4.083	.4074	4.481	.4259	4.898	.4444	5.333	.4630	5.787	0
1	.4074	4.287	.4259	4.694	.4444	5.120	.4630	5.565	.4815	6.028	1
2	.4259	4.509	.4444	4.926	.4630	5.361	.4815	5.815	.5000	6.287	2
3	.4444	4.750	.4630	5.176	.4815	5.620	.5000	6.083	.5185	6.565	3
4	.4630	5.009	.4815	5.444	.5000	5.898	.5185	6.370	.5370	6.861	4
5	.4815	5.287	.5000	5.731	.5185	6.194	.5370	6.676	.5556	7.176	5
6	.5000	5.583	.5185	6.037	.5370	6.509	.5556	7.000	.5741	7.509	6
7	.5185	5.898	.5370	6.361	.5556	6.843	.5741	7.343	.5926	7.861	7
8	.5370	6.231	.5556	6.704	.5741	7.194	.5926	7.704	.6111	8.231	8
9	.5556	6.583	.5741	7.065	.5926	7.565	.6111	8.083	.6296	8.620	9
10	.5741	6.954	.5926	7.444	.6111	7.954	.6296	8.481	.6481	9.028	10
11	.5926	7.343	.6111	7.843	.6296	8.361	.6481	8.898	.6667	9.454	11
12	.6111	7.750	.6296	8.259	.6481	8.787	.6667	9.333	.6852	9.898	12
13	.6296	8.176	.6481	8.694	.6667	9.231	.6852	9.787	.7037	10.361	13
14	.6481	8.620	.6667	9.148	.6852	9.694	.7037	10.259	.7222	10.843	14
15	.6667	9.083	.6852	9.620	.7037	10.176	.7222	10.750	.7407	11.343	15
16	.6852	9.565	.7037	10.111	.7222	10.676	.7407	11.259	.7593	11.861	16
17	.7037	10.065	.7222	10.620	.7407	11.194	.7593	11.787	.7778	12.398	17
18	.7222	10.583	.7407	11.148	.7593	11.731	.7778	12.333	.7963	12.954	18
19	.7407	11.120	.7593	11.694	.7778	12.287	.7963	12.898	.8148	13.528	19
20	.7593	11.676	.7778	12.259	.7963	12.861	.8148	13.481	.8333	14.120	20
21	.7778	12.250	.7963	12.843	.8148	13.454	.8333	14.083	.8519	14.731	21
22	.7963	12.843	.8148	13.444	.8333	14.065	.8519	14.704	.8704	15.361	22
23	.8148	13.454	.8333	14.065	.8519	14.694	.8704	15.343	.8889	16.009	23
24	.8333	14.083	.8519	14.704	.8704	15.343	.8889	16.000	.9074	16.676	24
25	.8519	14.731	.8704	15.361	.8889	16.009	.9074	16.676	.9259	17.361	25
26	.8704	15.398	.8889	16.037	.9074	16.694	.9259	17.370	.9444	18.065	26
27	.8889	16.083	.9074	16.731	.9259	17.398	.9444	18.083	.9630	18.787	27
28	.9074	16.787	.9259	17.444	.9444	18.120	.9630	18.815	.9815	19.528	28
29	.9259	17.509	.9444	18.176	.9630	18.861	.9815	19.565	1.0000	20.287	29
30	.9444	18.250	.9630	18.926	.9815	19.620	1.0000	20.333	1.0185	21.065	30
31	.9630	19.009	.9815	19.694	1.0000	20.398	1.0185	21.120	1.0370	21.861	31
32	.9815	19.787	1.0000	20.481	1.0185	21.194	1.0370	21.926	1.0556	22.676	32
33	1.0000	20.583	1.0185	21.287	1.0370	22.009	1.0556	22.750	1.0741	23.509	33
34	1.0185	21.398	1.0370	22.111	1.0556	22.843	1.0741	23.593	1.0926	24.361	34
35	1.0370	22.231	1.0556	22.954	1.0741	23.694	1.0926	24.454	1.1111	25.231	35
36	1.0556	23.083	1.0741	23.815	1.0926	24.565	1.1111	25.333	1.1296	26.120	36
37	1.0741	23.954	1.0926	24.694	1.1111	25.454	1.1296	26.231	1.1481	27.028	37
38	1.0926	24.843	1.1111	25.593	1.1296	26.361	1.1481	27.148	1.1667	27.954	38
39	1.1111	25.750	1.1296	26.509	1.1481	27.287	1.1667	28.083	1.1852	28.898	39
40	1.1296	26.676	1.1481	27.444	1.1667	28.231	1.1852	29.037	1.2047	29.861	40
41	1.1481	27.620	1.1667	28.398	1.1852	29.194	1.2047	30.009	1.2222	30.843	41
42	1.1667	28.583	1.1852	29.370	1.2047	30.176	1.2222	31.000	1.2407	31.843	42
43	1.1852	29.565	1.2047	30.361	1.2222	31.176	1.2407	32.009	1.2593	32.861	43
44	1.2047	30.565	1.2222	31.370	1.2407	32.194	1.2593	33.037	1.2778	33.898	44
45	1.2222	31.583	1.2407	32.398	1.2593	33.231	1.2778	34.083	1.2963	34.954	45
46	1.2407	32.620	1.2593	33.444	1.2778	34.287	1.2963	35.148	1.3148	36.028	46
47	1.2593	33.676	1.2778	34.509	1.2963	35.361	1.3148	36.231	1.3333	37.120	47
48	1.2778	34.750	1.2963	35.593	1.3148	36.454	1.3333	37.333	1.3519	38.231	48
49	1.2963	35.843	1.3148	36.694	1.3333	37.565	1.3519	38.454	1.3704	39.361	49
50	1.3148	36.954	1.3333	37.815	1.3519	38.694	1.3704	39.593	1.3889	40.509	50
	21		22		23		24		25		

TABLE XXIV.—BASE 1—SLOPES ¼ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	6.259	.5000	6.750	.5185	7.259	.5370	7.787	.5556	8.333	0
1	.5000	6.509	.5185	7.009	.5370	7.528	.5556	8.065	.5741	8.620	1
2	.5185	6.778	.5370	7.287	.5556	7.815	.5741	8.361	.5926	8.926	2
3	.5370	7.065	.5556	7.583	.5741	8.120	.5926	8.676	.6111	9.250	3
4	.5556	7.370	.5741	7.898	.5926	8.444	.6111	9.009	.6296	9.593	4
5	.5741	7.694	.5926	8.231	.6111	8.787	.6296	9.361	.6481	9.954	5
6	.5926	8.037	.6111	8.583	.6296	9.148	.6481	9.731	.6667	10.333	6
7	.6111	8.398	.6296	8.954	.6481	9.528	.6667	10.120	.6852	10.732	7
8	.6296	8.778	.6481	9.343	.6667	9.926	.6852	10.528	.7037	11.148	8
9	.6481	9.176	.6667	9.750	.6852	10.343	.7037	10.954	.7222	11.583	9
10	.6667	9.593	.6852	10.176	.7037	10.778	.7222	11.398	.7407	12.037	10
11	.6852	10.028	.7037	10.620	.7222	11.231	.7407	11.861	.7593	12.509	11
12	.7037	10.481	.7222	11.083	.7407	11.704	.7593	12.343	.7778	13.000	12
13	.7222	10.954	.7407	11.565	.7593	12.194	.7778	12.843	.7963	13.509	13
14	.7407	11.444	.7593	12.065	.7778	12.704	.7963	13.361	.8148	14.037	14
15	.7593	11.954	.7778	12.583	.7963	13.231	.8148	13.898	.8333	14.583	15
16	.7778	12.481	.7963	13.120	.8148	13.778	.8333	14.454	.8519	15.148	16
17	.7963	13.028	.8148	13.676	.8333	14.343	.8519	15.028	.8704	15.732	17
18	.8148	13.593	.8333	14.250	.8519	14.926	.8704	15.620	.8889	16.333	18
19	.8333	14.176	.8519	14.843	.8704	15.528	.8889	16.231	.9074	16.954	19
20	.8519	14.778	.8704	15.454	.8889	16.148	.9074	16.861	.9259	17.593	20
21	.8704	15.398	.8889	16.083	.9074	16.787	.9259	17.509	.9444	18.250	21
22	.8889	16.037	.9074	16.731	.9259	17.444	.9444	18.176	.9630	18.926	22
23	.9074	16.694	.9259	17.398	.9444	18.120	.9630	18.861	.9815	19.620	23
24	.9259	17.370	.9444	18.083	.9630	18.815	.9815	19.565	1.0000	20.333	24
25	.9444	18.065	.9630	18.787	.9815	19.528	1.0000	20.287	1.0185	21.065	25
26	.9630	18.778	.9815	19.509	1.0000	20.259	1.0185	21.028	1.0370	21.815	26
27	.9815	19.509	1.0000	20.250	1.0185	21.009	1.0370	21.787	1.0556	22.583	27
28	1.0000	20.259	1.0185	21.009	1.0370	21.778	1.0556	22.565	1.0741	23.370	28
29	1.0185	21.028	1.0370	21.787	1.0556	22.565	1.0741	23.361	1.0926	24.176	29
30	1.0370	21.815	1.0556	22.583	1.0741	23.370	1.0926	24.176	1.1111	25.000	30
31	1.0556	22.620	1.0741	23.398	1.0926	24.194	1.1111	25.009	1.1296	25.843	31
32	1.0741	23.444	1.0926	24.231	1.1111	25.037	1.1296	25.861	1.1481	26.704	32
33	1.0926	24.287	1.1111	25.083	1.1296	25.898	1.1481	26.731	1.1667	27.583	33
34	1.1111	25.148	1.1296	25.954	1.1481	26.778	1.1667	27.620	1.1852	28.481	34
35	1.1296	26.028	1.1481	26.843	1.1667	27.676	1.1852	28.528	1.2047	29.398	35
36	1.1481	26.926	1.1667	27.750	1.1852	28.593	1.2047	29.454	1.2222	30.333	36
37	1.1667	27.843	1.1852	28.675	1.2047	29.528	1.2222	30.398	1.2407	31.287	37
38	1.1852	28.778	1.2047	29.620	1.2222	30.481	1.2407	31.361	1.2593	32.259	38
39	1.2047	29.731	1.2222	30.583	1.2407	31.454	1.2593	32.343	1.2778	33.250	39
40	1.2222	30.704	1.2407	31.565	1.2593	32.444	1.2778	33.343	1.2963	34.259	40
41	1.2407	31.694	1.2593	32.565	1.2778	33.454	1.2963	34.361	1.3148	35.287	41
42	1.2593	32.704	1.2778	33.583	1.2963	34.481	1.3148	35.398	1.3333	36.333	42
43	1.2778	33.731	1.2963	34.620	1.3148	35.528	1.3333	36.454	1.3519	37.398	43
44	1.2963	34.778	1.3148	35.676	1.3333	36.595	1.3519	37.528	1.3704	38.481	44
45	1.3148	35.843	1.3333	36.750	1.3519	37.676	1.3704	38.620	1.3889	39.583	45
46	1.3333	36.926	1.3519	37.843	1.3704	38.778	1.3889	39.731	1.4074	40.704	46
47	1.3519	38.028	1.3704	38.954	1.3889	39.898	1.4074	40.861	1.4259	41.843	47
48	1.3704	39.148	1.3889	40.083	1.4074	41.037	1.4259	42.009	1.4444	43.000	48
49	1.3889	40.287	1.4074	41.231	1.4259	42.194	1.4444	43.176	1.4630	44.176	59
50	1.4074	41.444	1.4259	42.398	1.4444	43.370	1.4630	44.361	1.4815	45.370	50
	26		27		28		29		30		

TABLE XXIV.—BASE 1—SLOPES ¾ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	8.898	.5926	9.481	.6111	10.083	.6296	10.704	.6481	11.343	0
1	.5926	9.194	.6111	9.787	.6296	10.398	.6481	11.028	.6667	11.676	1
2	.6111	9.509	.6296	10.111	.6481	10.731	.6667	11.370	.6852	12.028	2
3	.6296	9.843	.6481	10.454	.6667	11.083	.6852	11.731	.7037	12.398	3
4	.6481	10.194	.6667	10.815	.6852	11.454	.7037	12.111	.7222	12.787	4
5	.6667	10.565	.6852	11.194	.7037	11.843	.7222	12.509	.7407	13.194	5
6	.6852	10.954	.7037	11.593	.7222	12.250	.7407	12.926	.7593	13.620	6
7	.7037	11.361	.7222	12.009	.7407	12.676	.7593	13.361	.7778	14.065	7
8	.7222	11.787	.7407	12.444	.7593	13.120	.7778	13.815	.7963	14.528	8
9	.7407	12.231	.7593	12.898	.7778	13.583	.7963	14.287	.8148	15.009	9
10	.7593	12.694	.7778	13.370	.7963	14.065	.8148	14.778	.8333	15.509	10
11	.7778	13.176	.7963	13.861	.8148	14.565	.8333	15.287	.8519	16.028	11
12	.7963	13.676	.8148	14.370	.8333	15.083	.8519	15.815	.8704	16.565	12
13	.8148	14.194	.8333	14.898	.8519	15.620	.8704	16.361	.8889	17.120	13
14	.8333	14.731	.8519	15.444	.8704	16.176	.8889	16.926	.9074	17.694	14
15	.8519	15.287	.8704	16.009	.8889	16.750	.9074	17.509	.9259	18.287	15
16	.8704	15.861	.8889	16.593	.9074	17.343	.9259	18.111	.9444	18.898	16
17	.8889	16.454	.9074	17.194	.9259	17.954	.9444	18.731	.9630	19.528	17
18	.9074	17.065	.9259	17.815	.9444	18.583	.9630	19.370	.9815	20.176	18
19	.9259	17.694	.9444	18.454	.9630	19.231	.9815	20.028	1.0000	20.843	19
20	.9444	18.343	.9630	19.111	.9815	19.898	1.0000	20.704	1.0185	21.528	20
21	.9630	19.009	.9815	19.787	1.0000	20.583	1.0185	21.398	1.0370	22.231	21
22	.9815	19.694	1.0000	20.481	1.0185	21.287	1.0370	22.111	1.0556	22.954	22
23	1.0000	20.398	1.0185	21.194	1.0370	22.009	1.0556	22.843	1.0741	23.694	23
24	1.0185	21.120	1.0370	21.926	1.0556	22.750	1.0741	23.593	1.0926	24.454	24
25	1.0370	21.861	1.0556	22.676	1.0741	23.509	1.0926	24.361	1.1111	25.231	25
26	1.0556	22.620	1.0741	23.444	1.0926	24.287	1.1111	25.148	1.1296	26.028	26
27	1.0741	23.398	1.0926	24.231	1.1111	25.083	1.1296	25.954	1.1481	26.843	27
28	1.0926	24.194	1.1111	25.037	1.1296	25.898	1.1481	26.778	1.1667	27.676	28
29	1.1111	25.009	1.1296	25.861	1.1481	26.731	1.1667	27.620	1.1852	28.528	29
30	1.1296	25.843	1.1481	26.704	1.1667	27.583	1.1852	28.481	1.2047	29.398	30
31	1.1481	26.694	1.1667	27.565	1.1852	28.454	1.2047	29.361	1.2222	30.287	31
32	1.1667	27.565	1.1852	28.444	1.2047	29.343	1.2222	30.259	1.2407	31.194	32
33	1.1852	28.454	1.2047	29.343	1.2222	30.250	1.2407	31.176	1.2593	32.120	33
34	1.2047	29.361	1.2222	30.259	1.2407	31.176	1.2593	32.111	1.2778	33.065	34
35	1.2222	30.287	1.2407	31.194	1.2593	32.120	1.2778	33.065	1.2963	34.028	35
36	1.2407	31.231	1.2593	32.148	1.2778	33.083	1.2963	34.037	1.3148	35.009	36
37	1.2593	32.194	1.2778	33.120	1.2963	34.065	1.3148	35.028	1.3333	36.009	37
38	1.2778	33.176	1.2963	34.111	1.3148	35.065	1.3333	36.037	1.3519	37.028	38
39	1.2963	34.176	1.3148	35.120	1.3333	36.083	1.3519	37.065	1.3704	38.065	39
40	1.3148	35.194	1.3333	36.148	1.3519	37.120	1.3704	38.111	1.3889	39.120	40
41	1.3333	36.231	1.3519	37.194	1.3704	38.176	1.3889	39.176	1.4074	40.194	41
42	1.3519	37.287	1.3704	38.259	1.3889	39.250	1.4074	40.259	1.4259	41.287	42
43	1.3704	38.361	1.3889	39.343	1.4074	40.343	1.4259	41.361	1.4444	42.398	43
44	1.3889	39.454	1.4074	40.444	1.4259	41.454	1.4444	42.481	1.4630	43.528	44
45	1.4074	40.565	1.4259	41.565	1.4444	42.583	1.4630	43.620	1.4815	44.676	45
46	1.4259	41.694	1.4444	42.704	1.4630	43.731	1.4815	44.778	1.5000	45.843	46
47	1.4444	42.843	1.4630	43.861	1.4815	44.898	1.5000	45.954	1.5185	47.028	47
48	1.4630	44.009	1.4815	45.037	1.5000	46.083	1.5185	47.148	1.5370	48.231	48
49	1.4815	45.194	1.5000	46.231	1.5185	47.287	1.5370	48.361	1.5556	49.454	49
50	1.5000	46.398	1.5185	47.444	1.5370	48.509	1.5556	49.593	1.5741	50.694	50
	31		32		33		34		35		

TABLE XXIV.—BASE 1—SLOPES $\frac{3}{4}$ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	12.000	.6852	12.676	.7037	13.370	.7222	14.083	.7407	14.815	0
1	.6852	12.343	.7037	13.028	.7222	13.731	.7407	14.454	.7593	15.194	1
2	.7037	12.704	.7222	13.398	.7407	14.111	.7593	14.843	.7778	15.593	2
3	.7222	13.083	.7407	13.787	.7593	14.509	.7778	15.250	.7963	16.009	3
4	.7407	13.481	.7593	14.194	.7778	14.926	.7963	15.676	.8148	16.444	4
5	.7593	13.898	.7778	14.620	.7963	15.361	.8148	16.120	.8333	16.898	5
6	.7778	14.333	.7963	15.065	.8148	15.815	.8333	16.583	.8519	17.370	6
7	.7963	14.787	.8148	15.528	.8333	16.287	.8519	17.065	.8704	17.861	7
8	.8148	15.259	.8333	16.009	.8519	16.778	.8704	17.565	.8889	18.370	8
9	.8333	15.750	.8519	16.509	.8704	17.287	.8889	18.083	.9074	18.898	9
10	.8519	16.259	.8704	17.028	.8889	17.815	.9074	18.620	.9259	19.444	10
11	.8704	16.787	.8889	17.565	.9074	18.361	.9259	19.176	.9444	20.009	11
12	.8889	17.333	.9074	18.120	.9259	18.926	.9444	19.750	.9630	20.593	12
13	.9074	17.896	.9259	18.694	.9444	19.509	.9630	20.343	.9815	21.194	13
14	.9259	18.481	.9444	19.287	.9630	20.111	.9815	20.954	1.0000	21.815	14
15	.9444	19.083	.9630	19.898	.9815	20.731	1.0000	21.583	1.0185	22.453	15
16	.9630	19.704	.9815	20.528	1.0000	21.370	1.0185	22.231	1.0370	23.111	16
17	.9815	20.343	1.0000	21.176	1.0185	22.028	1.0370	22.898	1.0556	23.787	17
18	1.0000	21.000	1.0185	21.843	1.0370	22.704	1.0556	23.583	1.0741	24.481	18
19	1.0185	21.676	1.0370	22.528	1.0556	23.398	1.0741	24.287	1.0926	25.194	19
20	1.0370	22.370	1.0556	23.231	1.0741	24.111	1.0926	25.009	1.1111	25.926	20
21	1.0556	23.083	1.0741	23.954	1.0926	24.843	1.1111	25.750	1.1296	26.676	21
22	1.0741	23.815	1.0926	24.694	1.1111	25.593	1.1296	26.509	1.1481	27.444	22
23	1.0926	24.565	1.1111	25.454	1.1296	26.361	1.1481	27.287	1.1667	28.231	23
24	1.1111	25.333	1.1296	26.231	1.1481	27.148	1.1667	28.083	1.1852	29.037	24
25	1.1296	26.120	1.1481	27.028	1.1667	27.954	1.1852	28.898	1.2047	29.861	25
26	1.1481	26.926	1.1667	27.843	1.1852	28.778	1.2047	29.731	1.2222	30.704	26
27	1.1667	27.750	1.1852	28.676	1.2047	29.620	1.2222	30.583	1.2407	31.565	27
28	1.1852	28.593	1.2047	29.528	1.2222	30.481	1.2407	31.454	1.2593	32.444	28
29	1.2047	29.454	1.2222	30.398	1.2407	31.361	1.2593	32.343	1.2778	33.343	29
30	1.2222	30.333	1.2407	31.287	1.2593	32.259	1.2778	33.250	1.2963	34.259	30
31	1.2407	31.231	1.2593	32.194	1.2778	33.176	1.2963	34.176	1.3148	35.194	31
32	1.2593	32.148	1.2778	33.120	1.2963	34.111	1.3148	35.120	1.3333	36.148	32
33	1.2778	33.083	1.2963	34.065	1.3148	35.065	1.3333	36.083	1.3519	37.120	33
34	1.2963	34.037	1.3148	35.028	1.3333	36.037	1.3519	37.065	1.3704	38.111	34
35	1.3148	35.009	1.3333	36.009	1.3519	37.028	1.3704	38.065	1.3889	39.120	35
36	1.3333	36.000	1.3519	37.009	1.3704	38.037	1.3889	39.083	1.4074	40.148	36
37	1.3519	37.009	1.3704	38.028	1.3889	39.065	1.4074	40.120	1.4259	41.194	37
38	1.3704	38.037	1.3889	39.065	1.4074	40.111	1.4259	41.176	1.4444	42.259	38
39	1.3889	39.083	1.4074	40.120	1.4259	41.176	1.4444	42.250	1.4630	43.343	39
40	1.4074	40.148	1.4259	41.194	1.4444	42.259	1.4630	43.343	1.4815	44.444	40
41	1.4259	41.231	1.4444	42.287	1.4630	43.361	1.4815	44.454	1.5000	45.565	41
42	1.4444	42.333	1.4630	43.398	1.4815	44.481	1.5000	45.583	1.5185	46.704	42
43	1.4630	43.454	1.4815	44.528	1.5000	45.620	1.5185	46.731	1.5370	47.861	43
44	1.4815	44.593	1.5000	45.676	1.5185	46.778	1.5370	47.898	1.5556	49.037	44
45	1.5000	45.750	1.5185	46.843	1.5370	47.954	1.5556	49.083	1.5741	50.231	45
46	1.5185	46.926	1.5370	48.028	1.5556	49.148	1.5741	50.287	1.5926	51.444	46
47	1.5370	48.120	1.5556	49.231	1.5741	50.361	1.5926	51.509	1.6111	52.676	47
48	1.5556	49.333	1.5741	50.454	1.5926	51.593	1.6111	52.750	1.6296	53.926	48
49	1.5741	50.565	1.5926	51.694	1.6111	52.843	1.6296	54.009	1.6481	55.194	49
50	1.5926	51.815	1.6111	52.954	1.6296	54.111	1.6481	55.287	1.6667	56.481	50
	36		37		38		39		40		

TABLE XXIV.—BASE I—SLOPES $\frac{4}{4}$ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	15.565	.7778	16.333	.7963	17.120	.8148	17.926	.8333	18.750	0
1	.7778	15.954	.7963	16.731	.8148	17.528	.8333	18.343	.8519	19.176	1
2	.7963	16.361	.8148	17.148	.8333	17.954	.8519	18.778	.8704	19.620	2
3	.8148	16.787	.8333	17.583	.8519	18.398	.8704	19.231	.8889	20.083	3
4	.8333	17.231	.8519	18.037	.8704	18.861	.8889	19.704	.9074	20.565	4
5	.8519	17.694	.8704	18.509	.8889	19.343	.9074	20.194	.9259	21.065	5
6	.8704	18.176	.8889	19.000	.9074	19.843	.9259	20.704	.9444	21.583	6
7	.8889	18.676	.9074	19.509	.9259	20.361	.9444	21.231	.9630	22.120	7
8	.9074	19.194	.9259	20.037	.9444	20.898	.9630	21.778	.9815	22.676	8
9	.9259	19.731	.9444	20.583	.9630	21.454	.9815	22.343	1.0000	23.250	9
10	.9444	20.287	.9630	21.148	.9815	22.028	1.0000	22.926	1.0185	23.843	10
11	.9630	20.861	.9815	21.731	1.0000	22.620	1.0185	23.528	1.0370	24.454	11
12	.9815	21.454	1.0000	22.333	1.0185	23.231	1.0370	24.148	1.0556	25.083	12
13	1.0000	22.065	1.0185	22.954	1.0370	23.861	1.0556	24.787	1.0741	25.731	13
14	1.0185	22.694	1.0370	23.593	1.0556	24.509	1.0741	25.444	1.0926	26.398	14
15	1.0370	23.343	1.0556	24.250	1.0741	25.176	1.0926	26.120	1.1111	27.083	15
16	1.0556	24.009	1.0741	24.926	1.0926	25.861	1.1111	26.815	1.1296	27.787	16
17	1.0741	24.694	1.0926	25.620	1.1111	26.565	1.1296	27.528	1.1481	28.509	17
18	1.0926	25.398	1.1111	26.333	1.1296	27.287	1.1481	28.259	1.1667	29.250	18
19	1.1111	26.120	1.1296	27.065	1.1481	28.028	1.1667	29.009	1.1852	30.009	19
20	1.1296	26.861	1.1481	27.815	1.1667	28.787	1.1852	29.778	1.2047	30.787	20
21	1.1481	27.620	1.1667	28.583	1.1852	29.565	1.2047	30.565	1.2222	31.583	21
22	1.1667	28.398	1.1852	29.370	1.2047	30.361	1.2222	31.370	1.2407	32.398	22
23	1.1852	29.194	1.2047	30.176	1.2222	31.176	1.2407	32.194	1.2593	33.231	23
24	1.2047	30.009	1.2222	31.000	1.2407	32.009	1.2593	33.037	1.2778	34.083	24
25	1.2222	30.843	1.2407	31.843	1.2593	32.861	1.2778	33.898	1.2963	34.954	25
26	1.2407	31.694	1.2593	32.704	1.2778	33.731	1.2963	34.778	1.3148	35.843	26
27	1.2593	32.565	1.2778	33.583	1.2963	34.620	1.3148	35.676	1.3333	36.750	27
28	1.2778	33.454	1.2963	34.481	1.3148	35.528	1.3333	36.593	1.3519	37.676	28
29	1.2963	34.361	1.3148	35.398	1.3333	36.454	1.3519	37.528	1.3704	38.620	29
30	1.3148	35.287	1.3333	36.333	1.3519	37.398	1.3704	38.481	1.3889	39.583	30
31	1.3333	36.231	1.3519	37.287	1.3704	38.361	1.3889	39.454	1.4074	40.565	31
32	1.3519	37.194	1.3704	38.259	1.3889	39.343	1.4074	40.444	1.4259	41.565	32
33	1.3704	38.176	1.3889	39.250	1.4074	40.343	1.4259	41.454	1.4444	42.583	33
34	1.3889	39.176	1.4074	40.259	1.4259	41.361	1.4444	42.481	1.4630	43.620	34
35	1.4074	40.194	1.4259	41.287	1.4444	42.398	1.4630	43.528	1.4815	44.676	35
36	1.4259	41.231	1.4444	42.333	1.4630	43.454	1.4815	44.593	1.5000	45.750	36
37	1.4444	42.287	1.4630	43.398	1.4815	44.528	1.5000	45.676	1.5185	46.843	37
38	1.4630	43.361	1.4815	44.481	1.5000	45.620	1.5185	46.778	1.5370	47.954	38
39	1.4815	44.454	1.5000	45.583	1.5185	46.731	1.5370	47.898	1.5556	49.083	39
40	1.5000	45.565	1.5185	46.704	1.5370	47.861	1.5556	49.037	1.5741	50.231	40
41	1.5185	46.694	1.5370	47.843	1.5556	49.009	1.5741	50.194	1.5926	51.398	41
42	1.5370	47.843	1.5556	49.000	1.5741	50.176	1.5926	51.370	1.6111	52.583	42
43	1.5556	49.009	1.5741	50.176	1.5926	51.361	1.6111	52.565	1.6296	53.787	43
44	1.5741	50.194	1.5926	51.370	1.6111	52.565	1.6296	53.778	1.6481	55.009	44
45	1.5926	51.398	1.6111	52.583	1.6296	53.787	1.6481	55.009	1.6667	56.250	45
46	1.6111	52.620	1.6296	53.815	1.6481	55.028	1.6667	56.259	1.6852	57.509	46
47	1.6296	53.861	1.6481	55.065	1.6667	56.287	1.6852	57.528	1.7037	58.787	47
48	1.6481	55.120	1.6667	56.333	1.6852	57.565	1.7037	58.815	1.7222	60.083	48
49	1.6667	56.398	1.6852	57.620	1.7037	58.861	1.7222	60.120	1.7407	61.398	49
50	1.6852	57.694	1.7037	58.926	1.7222	60.176	1.7407	61.444	1.7593	62.731	50
	41		42		43		44		45		

TABLE XXIV.—BASE I—SLOPES $\frac{3}{4}$ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	19.593	.8704	20.454	.8889	21.333	.9074	22.231	.9259	23.148	0
1	.8704	20.028	.8889	20.898	.9074	21.787	.9259	22.694	.9444	23.620	1
2	.8889	20.481	.9074	21.361	.9259	22.259	.9444	23.176	.9630	24.111	2
3	.9074	20.954	.9259	21.843	.9444	22.750	.9630	23.676	.9815	24.620	3
4	.9259	21.444	.9444	22.343	.9630	23.259	.9815	24.194	1.0000	25.148	4
5	.9444	21.954	.9630	22.861	.9815	23.787	1.0000	24.731	1.0185	25.694	5
6	.9630	22.481	.9815	23.398	1.0000	24.333	1.0185	25.287	1.0370	26.259	6
7	.9815	23.028	1.0000	23.954	1.0185	24.898	1.0370	25.861	1.0556	26.843	7
8	1.0000	23.593	1.0185	24.528	1.0370	25.481	1.0556	26.454	1.0741	27.444	8
9	1.0185	24.176	1.0370	25.120	1.0556	26.083	1.0741	27.065	1.0926	28.065	9
10	1.0370	24.778	1.0556	25.731	1.0741	26.704	1.0926	27.694	1.1111	28.704	10
11	1.0556	25.398	1.0741	26.361	1.0926	27.343	1.1111	28.343	1.1296	29.361	11
12	1.0741	26.037	1.0926	27.009	1.1111	28.000	1.1296	29.009	1.1481	30.037	12
13	1.0926	26.694	1.1111	27.676	1.1296	28.676	1.1481	29.694	1.1667	30.731	13
14	1.1111	27.370	1.1296	28.361	1.1481	29.370	1.1667	30.398	1.1852	31.444	14
15	1.1296	28.065	1.1481	29.065	1.1667	30.083	1.1852	31.120	1.2047	32.176	15
16	1.1481	28.778	1.1667	29.787	1.1852	30.815	1.2047	31.861	1.2222	32.926	16
17	1.1667	29.509	1.1852	30.528	1.2047	31.565	1.2222	32.620	1.2407	33.694	17
18	1.1852	30.259	1.2047	31.287	1.2222	32.333	1.2407	33.398	1.2593	34.481	18
19	1.2047	31.028	1.2222	32.065	1.2407	33.120	1.2593	34.194	1.2778	35.287	19
20	1.2222	31.815	1.2407	32.861	1.2593	33.926	1.2778	35.009	1.2963	36.111	20
21	1.2407	32.620	1.2593	33.676	1.2778	34.750	1.2963	35.843	1.3148	36.954	21
22	1.2593	33.444	1.2778	34.509	1.2963	35.593	1.3148	36.694	1.3333	37.815	22
23	1.2778	34.287	1.2963	35.361	1.3148	36.454	1.3333	37.565	1.3519	38.694	23
24	1.2963	35.148	1.3148	36.231	1.3333	37.333	1.3519	38.454	1.3704	39.593	24
25	1.3148	36.028	1.3333	37.120	1.3519	38.231	1.3704	39.361	1.3889	40.509	25
26	1.3333	36.926	1.3519	38.028	1.3704	39.148	1.3889	40.287	1.4074	41.444	26
27	1.3519	37.843	1.3704	38.954	1.3889	40.083	1.4074	41.231	1.4259	42.398	27
28	1.3704	38.778	1.3889	39.898	1.4074	41.037	1.4259	42.194	1.4444	43.370	28
29	1.3889	39.731	1.4074	40.861	1.4259	42.009	1.4444	43.176	1.4630	44.361	29
30	1.4074	40.704	1.4259	41.843	1.4444	43.000	1.4630	44.176	1.4815	45.370	30
31	1.4259	41.694	1.4444	42.843	1.4630	44.009	1.4815	45.194	1.5000	46.398	31
32	1.4444	42.704	1.4630	43.861	1.4815	45.037	1.5000	46.231	1.5185	47.444	32
33	1.4630	43.731	1.4815	44.898	1.5000	46.083	1.5185	47.287	1.5370	48.509	33
34	1.4815	44.778	1.5000	45.954	1.5185	47.148	1.5370	48.361	1.5556	49.593	34
35	1.5000	45.843	1.5185	47.028	1.5370	48.231	1.5556	49.454	1.5741	50.694	35
36	1.5185	46.926	1.5370	48.120	1.5556	49.333	1.5741	50.565	1.5926	51.815	36
37	1.5370	48.028	1.5556	49.231	1.5741	50.454	1.5926	51.694	1.6111	52.954	37
38	1.5556	49.148	1.5741	50.361	1.5926	51.593	1.6111	52.843	1.6296	54.111	38
39	1.5741	50.287	1.5926	51.509	1.6111	52.750	1.6296	54.009	1.6481	55.287	39
40	1.5926	51.444	1.6111	52.676	1.6296	53.926	1.6481	55.194	1.6667	56.481	40
41	1.6111	52.620	1.6296	53.861	1.6481	55.120	1.6667	56.398	1.6852	57.694	41
42	1.6296	53.815	1.6481	55.065	1.6667	56.333	1.6852	57.620	1.7037	58.926	42
43	1.6481	55.028	1.6667	56.287	1.6852	57.565	1.7037	58.861	1.7222	60.176	43
44	1.6667	56.259	1.6852	57.528	1.7037	58.815	1.7222	60.120	1.7407	61.444	44
45	1.6852	57.509	1.7037	58.787	1.7222	60.083	1.7407	61.398	1.7593	62.731	45
46	1.7037	58.778	1.7222	60.065	1.7407	61.370	1.7593	62.694	1.7778	64.037	46
47	1.7222	60.065	1.7407	61.361	1.7593	62.676	1.7778	64.009	1.7963	65.361	47
48	1.7407	61.370	1.7593	62.676	1.7778	64.000	1.7963	65.343	1.8148	66.704	48
49	1.7593	62.694	1.7778	64.009	1.7963	65.343	1.8148	66.694	1.8333	68.065	49
50	1.7778	64.037	1.7963	65.361	1.8148	66.704	1.8333	68.065	1.8519	69.444	50
	46		47		48		49		50		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.012	.0370	0.049	.0556	0.111	.0741	0.198	.0926	0.278	0
1	.0370	0.037	.0556	0.086	.0741	0.160	.0926	0.259	.1111	0.383	1
2	.0556	0.086	.0741	0.148	.0926	0.235	.1111	0.346	.1296	0.481	2
3	.0741	0.160	.0926	0.235	.1111	0.333	.1296	0.457	.1481	0.605	3
4	.0926	0.259	.1111	0.346	.1296	0.457	.1481	0.593	.1667	0.753	4
5	.1111	0.383	.1296	0.481	.1481	0.605	.1667	0.753	.1852	0.926	5
6	.1296	0.531	.1481	0.642	.1667	0.778	.1852	0.938	.2047	1.123	6
7	.1481	0.704	.1667	0.827	.1852	0.975	.2047	1.148	.2222	1.346	7
8	.1667	0.889	.1852	1.037	.2047	1.296	.2222	1.383	.2407	1.593	8
9	.1852	1.123	.2047	1.272	.2222	1.444	.2407	1.642	.2593	1.864	9
10	.2047	1.370	.2222	1.531	.2407	1.716	.2593	1.926	.2778	2.160	10
11	.2222	1.642	.2407	1.815	.2593	2.012	.2778	2.235	.2963	2.481	11
12	.2407	1.938	.2593	2.123	.2778	2.333	.2963	2.568	.3148	2.827	12
13	.2593	2.259	.2778	2.457	.2963	2.679	.3148	2.926	.3333	3.198	13
14	.2778	2.605	.2963	2.815	.3148	3.049	.3333	3.309	.3519	3.593	14
15	.2963	2.975	.3148	3.198	.3333	3.444	.3519	3.716	.3704	4.012	15
16	.3148	3.370	.3333	3.605	.3519	3.864	.3704	4.148	.3889	4.457	16
17	.3333	3.790	.3519	4.037	.3704	4.309	.3889	4.605	.4074	4.926	17
18	.3519	4.235	.3704	4.494	.3889	4.778	.4074	5.086	.4259	5.420	18
19	.3704	4.704	.3889	4.975	.4074	5.272	.4259	5.593	.4444	5.938	19
20	.3889	5.198	.4074	5.481	.4259	5.790	.4444	6.061	.4630	6.481	20
21	.4074	5.716	.4259	6.012	.4444	6.333	.4630	6.679	.4815	7.049	21
22	.4259	6.259	.4444	6.568	.4630	6.901	.4815	7.259	.5000	7.642	22
23	.4444	6.827	.4630	7.148	.4815	7.494	.5000	7.864	.5185	8.259	23
24	.4630	7.420	.4815	7.753	.5000	8.111	.5185	8.494	.5370	8.901	24
25	.4815	8.037	.5000	8.383	.5185	8.753	.5370	9.148	.5556	9.568	25
26	.5000	8.679	.5185	9.037	.5370	9.420	.5556	9.827	.5741	10.259	26
27	.5185	9.346	.5370	9.716	.5556	10.111	.5741	10.531	.5926	10.975	27
28	.5370	10.037	.5556	10.420	.5741	10.827	.5926	11.259	.6111	11.716	28
29	.5556	10.753	.5741	11.148	.5926	11.568	.6111	12.012	.6296	12.481	29
30	.5741	11.494	.5926	11.901	.6111	12.333	.6296	12.790	.6481	13.272	30
31	.5926	12.259	.6111	12.679	.6296	13.123	.6481	13.593	.6667	14.086	31
32	.6111	13.049	.6296	13.481	.6481	13.938	.6667	14.420	.6852	14.926	32
33	.6296	13.864	.6481	14.309	.6667	14.778	.6852	15.272	.7037	15.790	33
34	.6481	14.704	.6667	15.160	.6852	15.642	.7037	16.148	.7222	16.679	34
35	.6667	15.568	.6852	16.037	.7037	16.531	.7222	17.049	.7407	17.593	35
36	.6852	16.457	.7037	16.938	.7222	17.444	.7407	17.975	.7593	18.531	36
37	.7037	17.370	.7222	17.864	.7407	18.383	.7593	18.926	.7778	19.494	37
38	.7222	18.309	.7407	18.815	.7593	19.346	.7778	19.901	.7963	20.481	38
39	.7407	19.272	.7593	19.790	.7778	20.333	.7963	20.901	.8148	21.494	39
40	.7593	20.259	.7778	20.790	.7963	21.346	.8148	21.926	.8333	22.531	40
41	.7778	21.272	.7963	21.815	.8148	22.383	.8333	22.975	.8519	23.593	41
42	.7963	22.309	.8148	22.864	.8333	23.444	.8519	24.049	.8704	24.679	42
43	.8148	23.370	.8333	23.938	.8519	24.531	.8704	25.148	.8889	25.790	43
44	.8333	24.457	.8519	25.037	.8704	25.642	.8889	26.272	.9074	26.926	44
45	.8519	25.568	.8704	26.160	.8889	26.778	.9074	27.420	.9259	28.086	45
46	.8704	26.704	.8889	27.309	.9074	27.938	.9259	28.593	.9444	29.272	46
47	.8889	27.864	.9074	28.481	.9259	29.123	.9444	29.790	.9630	30.481	47
48	.9074	29.049	.9259	29.679	.9444	30.333	.9630	31.012	.9815	31.716	48
49	.9259	30.259	.9444	30.901	.9630	31.568	.9815	32.259	1.0000	32.975	49
50	.9444	31.494	.9630	32.148	.9815	32.827	1.0000	33.531	1.0185	34.259	50
	1		2		3		4		5		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	0.444	.1296	0.605	.1481	0.790	.1667	1.000	.1852	1.235	0
1	.1296	0.531	.1481	0.704	.1667	0.901	.1852	1.123	.2047	1.370	1
2	.1481	0.642	.1667	0.827	.1852	1.037	.2047	1.272	.2222	1.531	2
3	.1667	0.778	.1852	0.975	.2047	1.198	.2222	1.444	.2407	1.716	3
4	.1852	0.938	.2047	1.148	.2222	1.383	.2407	1.642	.2593	1.926	4
5	.2047	1.123	.2222	1.346	.2407	1.593	.2593	1.864	.2778	2.160	5
6	.2222	1.333	.2407	1.568	.2593	1.827	.2778	2.111	.2963	2.420	6
7	.2407	1.568	.2593	1.815	.2778	2.086	.2963	2.383	.3148	2.704	7
8	.2593	1.827	.2778	2.086	.2963	2.370	.3148	2.679	.3333	3.012	8
9	.2778	2.111	.2963	2.383	.3148	2.679	.3333	3.000	.3519	3.346	9
10	.2963	2.420	.3148	2.704	.3333	3.012	.3519	3.346	.3704	3.704	10
11	.3148	2.753	.3333	3.049	.3519	3.370	.3704	3.716	.3889	4.086	11
12	.3333	3.111	.3519	3.420	.3704	3.753	.3889	4.111	.4074	4.494	12
13	.3519	3.494	.3704	3.815	.3889	4.160	.4074	4.531	.4259	4.926	13
14	.3704	3.901	.3889	4.235	.4074	4.593	.4259	4.975	.4444	5.383	14
15	.3889	4.333	.4074	4.679	.4259	5.049	.4444	5.444	.4630	5.864	15
16	.4074	4.790	.4259	5.148	.4444	5.531	.4630	5.938	.4815	6.370	16
17	.4259	5.272	.4444	5.642	.4630	6.037	.4815	6.457	.5000	6.901	17
18	.4444	5.778	.4630	6.160	.4815	6.568	.5000	7.000	.5185	7.457	18
19	.4630	6.309	.4815	6.704	.5000	7.123	.5185	7.568	.5370	8.037	19
20	.4815	6.864	.5000	7.272	.5185	7.704	.5370	8.160	.5556	8.642	20
21	.5000	7.444	.5185	7.864	.5370	8.309	.5556	8.778	.5741	9.272	21
22	.5185	8.049	.5370	8.481	.5556	8.938	.5741	9.420	.5926	9.926	22
23	.5370	8.679	.5556	9.123	.5741	9.593	.5926	10.086	.6111	10.605	23
24	.5556	9.333	.5741	9.790	.5926	10.272	.6111	10.778	.6296	11.309	24
25	.5741	10.012	.5926	10.481	.6111	10.975	.6296	11.494	.6481	12.037	25
26	.5926	10.716	.6111	11.198	.6296	11.704	.6481	12.235	.6667	12.790	26
27	.6111	11.444	.6296	11.938	.6481	12.457	.6667	13.000	.6852	13.568	27
28	.6296	12.198	.6481	12.704	.6667	13.235	.6852	13.790	.7037	14.370	28
29	.6481	12.975	.6667	13.494	.6852	14.037	.7037	14.605	.7222	15.198	29
30	.6667	13.778	.6852	14.309	.7037	14.864	.7222	15.444	.7407	16.049	30
31	.6852	14.605	.7037	15.148	.7222	15.716	.7407	16.309	.7593	16.926	31
32	.7037	15.457	.7222	16.012	.7407	16.593	.7593	17.198	.7778	17.827	32
33	.7222	16.333	.7407	16.901	.7593	17.494	.7778	18.111	.7963	18.753	33
34	.7407	17.235	.7593	17.815	.7778	18.420	.7963	19.049	.8148	19.704	34
35	.7593	18.160	.7778	18.753	.7963	19.370	.8148	20 012	.8333	20.679	35
36	.7778	19.111	.7963	19.716	.8148	20.346	.8333	21.000	.8519	21.679	36
37	.7963	20.086	.8148	20.704	.8333	21.346	.8519	22.012	.8704	22.704	37
38	.8148	21.086	.8333	21.716	.8519	22.370	.8704	23.049	.8889	23.753	38
39	.8333	22.111	.8519	22.753	.8704	23.420	.8889	24.111	.9074	24.827	39
40	.8519	23.160	.8704	23.815	.8889	24.494	.9074	25.198	.9259	25.926	40
41	.8704	24.235	.8889	24.901	.9074	25.593	.9259	26.309	.9444	27.049	41
42	.8889	25.333	.9074	26.012	.9259	26.716	.9444	27.444	.9630	28.198	42
43	.9074	26.457	.9259	27.148	.9444	27.864	.9630	28.605	.9815	29.370	43
44	.9259	27.605	.9444	28.309	.9630	29.037	.9815	29.790	1.0000	30.568	44
45	.9444	28.778	.9630	29.494	.9815	30.235	1.0000	31.000	1.0185	31.790	45
46	.9630	29.975	.9815	30.704	1.0000	31.457	1.0185	32.235	1.0370	33.037	46
47	.9815	31.198	1.0000	31.938	1.0185	32.704	1.0370	33.494	1.0556	34.309	47
48	1.0000	32.444	1.0185	33.198	1.0370	33.975	1.0556	34.778	1.0741	35.605	48
49	1.0185	33.716	1.0370	34.481	1.0556	35.272	1.0741	36.086	1.0926	36.926	49
50	1.0370	35.012	1.0556	35.790	1.0741	36.593	1.0926	37.420	1.1111	38.272	50
	6		7		8		9		10		

TABLE XXV.—BASE 1—SLOPES 1 *to* 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	1.494	.2222	1.778	.2407	2.086	.2593	2.420	.2778	2.778	0
1	.2222	1.642	.2407	1.938	.2593	2.259	.2778	2.605	.2963	2.975	1
2	.2407	1.815	.2593	2.123	.2778	2.457	.2963	2.815	.3148	3.198	2
3	.2593	2.012	.2778	2.333	.2963	2.679	.3148	3.049	.3333	3.444	3
4	.2778	2.235	.2963	2.568	.3148	2.926	.3333	3.309	.3519	3.716	4
5	.2963	2.481	.3148	2.827	.3333	3.198	.3519	3.593	.3704	4.012	5
6	.3148	2.753	.3333	3.111	.3519	3.494	.3704	3.901	.3889	4.333	6
7	.3333	3.049	.3519	3.420	.3704	3.815	.3889	4.235	.4074	4.679	7
8	.3519	3.370	.3704	3.753	.3889	4.161	.4074	4.593	.4259	5.049	8
9	.3704	3.716	.3889	4.111	.4074	4.531	.4259	4.975	.4444	5.444	9
10	.3889	4.086	.4074	4.494	.4259	4.926	.4444	5.383	.4630	5.864	10
11	.4074	4.481	.4259	4.901	.4444	5.346	.4630	5.815	.4815	6.309	11
12	.4259	4.901	.4444	5.333	.4630	5.790	.4815	6.272	.5000	6.778	12
13	.4444	5.346	.4630	5.790	.4815	6.259	.5000	6.753	.5185	7.272	13
14	.4630	5.815	.4815	6.272	.5000	6.753	.5185	7.259	.5370	7.790	14
15	.4815	6.309	.5000	6.778	.5185	7.272	.5370	7.790	.5556	8.333	15
16	.5000	6.827	.5185	7.309	.5370	7.815	.5556	8.346	.5741	8.901	16
17	.5185	7.370	.5370	7.864	.5556	8.383	.5741	8.926	.5926	9.494	17
18	.5370	7.938	.5556	8.444	.5741	8.975	.5926	9.531	.6111	10.111	18
19	.5556	8.531	.5741	9.049	.5926	9.593	.6111	10.160	.6296	10.753	19
20	.5741	9.148	.5926	9.679	.6111	10.235	.6296	10.815	.6481	11.420	20
21	.5926	9.790	.6111	10.333	.6296	10.901	.6481	11.494	.6667	12.111	21
22	.6111	10.457	.6296	11.012	.6481	11.593	.6667	12.198	.6852	12.827	22
23	.6296	11.148	.6481	11.716	.6667	12.309	.6852	12.926	.7037	13.568	23
24	.6481	11.864	.6667	12.444	.6852	13.049	.7037	13.679	.7222	14.333	24
25	.6667	12.605	.6852	13.198	.7037	13.815	.7222	14.457	.7407	15.123	25
26	.6852	13.370	.7037	13.975	.7222	14.605	.7407	15.259	.7593	15.938	26
27	.7037	14.160	.7222	14.778	.7407	15.420	.7593	16.086	.7778	16.778	27
28	.7222	14.975	.7407	15.605	.7593	16.259	.7778	16.938	.7963	17.642	28
29	.7407	15.815	.7593	16.457	.7778	17.123	.7963	17.815	.8148	18.531	29
30	.7593	16.679	.7778	17.333	.7963	18.012	.8148	18.716	.8333	19.444	30
31	.7778	17.568	.7963	18.235	.8148	18.926	.8333	19.642	.8519	20.383	31
32	.7963	18.481	.8148	19.160	.8333	19.864	.8519	20.593	.8704	21.346	32
33	.8148	19.420	.8333	20.111	.8519	20.827	.8704	21.568	.8889	22.333	33
34	.8333	20.383	.8519	21.086	.8704	21.815	.8889	22.568	.9074	23.346	34
35	.8519	21.370	.8704	22.086	.8889	22.827	.9074	23.593	.9259	24.383	35
36	.8704	22.383	.8889	23.111	.9074	23.864	.9259	24.642	.9444	25.444	36
37	.8889	23.420	.9074	24.160	.9259	24.926	.9444	25.716	.9630	26.531	37
38	.9074	24.481	.9259	25.235	.9444	26.012	.9630	26.815	.9815	27.642	38
39	.9259	25.568	.9444	26.333	.9630	27.123	.9815	27.938	1.0000	28.778	39
40	.9444	26.679	.9630	27.457	.9815	28.259	1.0000	29.086	1.0185	29.938	40
41	.9630	27.815	.9815	28.605	1.0000	29.420	1.0185	30.259	1.0370	31.123	41
42	.9815	28.975	1.0000	29.778	1.0185	30.605	1.0370	31.457	1.0556	32.333	42
43	1.0000	30.160	1.0185	30.975	1.0370	31.815	1.0556	32.679	1.0741	33.568	43
44	1.0185	31.370	1.0370	32.198	1.0556	33.049	1.0741	33.926	1.0926	34.827	44
45	1.0370	32.605	1.0556	33.444	1.0741	34.309	1.0926	35.198	1.1111	36.111	45
46	1.0556	33.864	1.0741	34.716	1.0926	35.593	1.1111	36.494	1.1296	37.420	46
47	1.0741	35.148	1.0926	36.012	1.1111	36.901	1.1296	37.815	1.1481	38.753	47
48	1.0926	36.457	1.1111	37.333	1.1296	38.235	1.1481	39.160	1.1667	40.111	48
49	1.1111	37.790	1.1296	38.679	1.1481	39.593	1.1667	40.531	1.1852	41.494	49
50	1.1296	39.148	1.1481	40.049	1.1667	40.975	1.1852	41.926	1.2047	42.901	50
	11		12		13		14		15		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	3.160	.3148	3.568	.3333	4.000	.3519	4.457	.3704	4.938	0
1	.3148	3.370	.3333	3.790	.3519	4.234	.3704	4.704	.3889	5.198	1
2	.3333	3.605	.3519	4.037	.3704	4.494	.3889	4.975	.4074	5.481	2
3	.3519	3.864	.3704	4.309	.3889	4.778	.4074	5.272	4259	5.790	3
4	.3704	4.148	.3889	4.605	.4074	5.086	.4259	5.593	.4444	6.123	4
5	.3889	4.457	.4074	4.926	.4259	5.420	.4444	5.938	.4630	6.481	5
6	.4074	4.790	.4259	5.272	.4444	5.778	.4630	6.309	.4815	6.864	6
7	.4259	5.148	.4444	5.642	.4630	6.160	.4815	6.704	.5000	7.272	7
8	.4444	5.531	.4630	6.037	.4815	6.568	.5000	7.123	.5185	7.704	8
9	.4630	5.938	.4815	6.457	.5000	7.000	.5185	7.568	.5370	8.160	9
10	.4815	6.370	.5000	6.901	.5185	7.457	.5370	8.037	.5556	8.642	10
11	.5000	6.827	.5185	7.370	.5370	7.938	.5556	8.531	.5741	9.148	11
12	.5185	7.309	.5370	7.864	.5556	8.444	.5741	9.049	.5926	9.679	12
13	.5370	7.815	.5556	8.383	.5741	8.975	.5926	9.593	.6111	10.235	13
14	.5556	8.346	.5741	8.926	.5926	9.531	.6111	10.160	.6296	10.815	14
15	.5741	8.901	.5926	9.494	.6111	10.111	.6296	10.753	.6481	11.420	15
16	.5926	9.481	.6111	10.086	.6296	10.716	.6481	11.370	.6667	12.049	16
17	.6111	10.086	.6296	10.704	.6481	11.346	.6667	12.012	.6852	12.704	17
18	.6296	10.716	.6481	11.346	.6667	12.000	.6852	12.679	.7037	13.383	18
19	.6481	11.370	.6667	12.012	.6852	12.679	.7037	13.370	.7222	14.086	19
20	.6667	12.049	.6852	12.704	.7037	13.383	.7222	14.086	.7407	14.815	20
21	.6852	12.753	.7037	13.420	.7222	14.111	.7407	14.827	.7593	15.568	21
22	.7037	13.481	.7222	14.160	.7407	14.864	.7593	15.593	.7778	16.346	22
23	.7222	14.235	.7407	14.926	.7593	15.642	.7778	16.383	.7963	17.148	23
24	.7407	15.012	.7593	15.716	.7778	16.444	.7963	17.198	.8148	17.975	24
25	.7593	15.815	.7778	16.531	.7963	17.272	.8148	18.037	.8333	18.827	25
26	.7778	16.642	.7963	17.370	.8148	18.123	.8333	18.901	.8519	19.704	26
27	.7963	17.494	.8148	18.235	.8333	19.000	.8519	19.790	.8704	20.605	27
28	.8148	18.370	.8333	19.123	.8519	19.901	.8704	20.704	.8889	21.531	28
29	.8333	19.272	.8519	20.037	.8704	20.827	.8889	21.642	.9074	22.481	29
30	.8519	20.198	.8704	20.975	.8889	21.778	.9074	22.605	.9259	23.457	30
31	.8704	21.148	.8889	21.938	.9074	22.753	.9259	23.593	.9444	24.457	31
32	.8889	22.123	.9074	22.926	.9259	23.753	.9444	24.605	.9630	25.481	32
33	.9074	23.123	.9259	23.938	.9444	24.778	.9630	25.642	.9815	26.531	33
34	.9259	24.148	.9444	24.975	.9630	25.827	.9815	26.704	1.0000	27.605	34
35	.9444	25.198	.9630	26.037	.9815	26.901	1.0000	27.790	1.0185	28.704	35
36	.9630	26.272	.9815	27.123	1.0000	28.000	1.0185	28.901	1.0370	29.827	36
37	.9815	27.370	1.0000	28.235	1.0185	29.123	1.0370	30.037	1.0556	30.975	37
38	1.0000	28.494	1.0185	29.370	1.0370	30.272	1.0556	31.198	1.0741	32.148	38
39	1.0185	29.642	1.0370	30.531	1.0556	31.444	1.0741	32.383	1.0926	33.346	39
40	1.0370	30.815	1.0556	31.716	1.0741	32.642	1.0926	33.593	1.1111	34.568	40
41	1.0556	32.012	1.0741	32.926	1.0926	33.864	1.1111	34.827	1.1296	35.815	41
42	1.0741	33.235	1.0926	34.160	1.1111	35.111	1.1296	36.086	1.1481	37.086	42
43	1.0926	34.481	1.1111	35.420	1.1296	36.383	1.1481	37.370	1.1667	38.383	43
44	1.1111	35.753	1.1296	36.704	1.1481	37.679	1.1667	38.679	1.1852	39.704	44
45	1.1296	37.049	1.1481	38.012	1.1667	39.000	1.1852	40.012	1.2047	41.049	45
46	1.1481	38.370	1.1667	39.346	1.1852	40.346	1.2047	41.370	1.2222	42.420	46
47	1.1667	39.716	1.1852	40.704	1.2047	41.716	1.2222	42.753	1.2407	43.815	47
48	1.1852	41.086	1.2047	42.086	1.2222	43.111	1.2407	44.160	1.2593	45.235	48
49	1.2047	42.481	1.2222	43.494	1.2407	44.531	1.2593	45.593	1.2778	46.679	49
50	1.2222	43.901	1.2407	44.926	1.2593	45.975	1 2778	47.049	1.2963	48.148	50
	16		17		18		19		20		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	5.444	.4074	5.975	.4259	6.531	.4444	7.111	.4630	7.716	0
1	.4074	5.716	.4259	6.259	.4444	6.827	.4630	7.420	.4815	8.037	1
2	.4259	6.012	.4444	6.568	.4630	7.148	.4815	7.753	.5000	8.383	2
3	.4444	6.333	.4630	6.901	.4815	7.494	.5000	8.111	.5185	8.753	3
4	.4630	6.679	.4815	7.259	.5000	7.864	.5185	8.494	.5370	9.148	4
5	.4815	7.049	.5000	7.642	.5185	8.259	.5370	8.901	.5556	9.568	5
6	.5000	7.444	.5185	8.049	.5370	8.679	.5556	9.333	.5741	10.012	6
7	.5185	7.864	.5370	8.481	.5556	9.123	.5741	9.790	.5926	10.481	7
8	.5370	8.309	.5556	8.938	.5741	9.593	.5926	10.272	.6111	10.975	8
9	.5556	8.778	.5741	9.420	.5926	10.086	.6111	10.778	.6296	11.494	9
10	.5741	9.272	.5926	9.926	.6111	10.605	.6296	11.309	.6481	12.037	10
11	.5926	9.790	.6111	10.457	.6296	11.148	.6481	11.864	.6667	12.605	11
12	.6111	10.333	.6296	11.012	.6481	11.716	.6667	12.444	.6852	13.198	12
13	.6296	10.901	.6481	11.593	.6667	12.309	.6852	13.049	.7037	13.815	13
14	.6481	11.494	.6667	12.198	.6852	12.926	.7037	13.679	.7222	14.457	14
15	.6667	12.111	.6852	12.827	.7037	13.568	.7222	14.333	.7407	15.123	15
16	.6852	12.753	.7037	13.481	.7222	14.235	.7407	15.012	.7593	15.815	16
17	.7037	13.420	.7222	14.160	.7407	14.926	.7593	15.716	.7778	16.531	17
18	.7222	14.111	.7407	14.864	.7593	15.642	.7778	16.444	.7963	17.272	18
19	.7407	14.827	.7593	15.593	.7778	16.383	.7963	17.198	.8148	18.037	19
20	.7593	15.568	.7778	16.346	.7963	17.148	.8148	17.975	.8333	18.827	20
21	.7778	16.333	.7963	17.123	.8148	17.938	.8333	18.778	.8519	19.642	21
22	.7963	17.123	.8148	17.926	.8333	18.753	.8519	19.605	.8704	20.481	22
23	.8148	17.938	.8333	18.753	.8519	19.593	.8704	20.457	.8889	21.346	23
24	.8333	18.778	.8519	19.605	.8704	20.457	.8889	21.333	.9074	22.235	24
25	.8519	19.642	.8704	20.481	.8889	21.346	.9074	22.235	.9259	23.148	25
26	.8704	20.531	.8889	21.383	.9074	22.259	.9259	23.160	.9444	24.086	26
27	.8889	21.444	.9074	22.309	.9259	23.198	.9444	24.111	.9630	25.049	27
28	.9074	22.383	.9259	23.259	.9444	24.160	.9630	25.086	.9815	26.037	28
29	.9259	23.346	.9444	24.235	.9630	25.148	.9815	26.086	1.0000	27.049	29
30	.9444	24.333	.9630	25.235	.9815	26.160	1.0000	27.111	1.0185	28.086	30
31	.9630	25.346	.9815	26.259	1.0000	27.198	1.0185	28.160	1.0370	29.148	31
32	.9815	26.383	1.0000	27.309	1.0185	28.259	1.0370	29.235	1.0556	30.235	32
33	1.0000	27.444	1.0185	28.383	1.0370	29.346	1.0556	30.333	1.0741	31.346	33
34	1.0185	28.531	1.0370	29.481	1.0556	30.457	1.0741	31.457	1.0926	32.481	34
35	1.0370	29.642	1.0556	30.605	1.0741	31.593	1.0926	32.605	1.1111	33.642	35
36	1.0556	30.778	1.0741	31.753	1.0926	32.753	1.1111	33.778	1.1296	34.827	36
37	1.0741	31.938	1.0926	32.926	1.1111	33.938	1.1296	34.975	1.1481	36.037	37
38	1.0926	33.123	1.1111	34.123	1.1296	35.148	1.1481	36.198	1.1667	37.272	38
39	1.1111	34.333	1.1296	35.346	1.1481	36.383	1.1667	37.444	1.1852	38.531	39
40	1.1296	35.568	1.1481	36.593	1.1667	37.642	1.1852	38.716	1.2047	39.815	40
41	1.1481	36.827	1.1667	37.864	1.1852	38.926	1.2047	40.012	1.2222	41.123	41
42	1.1667	38.111	1.1852	39.160	1.2047	40.235	1.2222	41.333	1.2407	42.457	42
43	1.1852	39.420	1.2047	40.481	1.2222	41.568	1.2407	42.679	1.2593	43.815	43
44	1.2047	40.753	1.2222	41.827	1.2407	42.926	1.2593	44.049	1.2778	45.198	44
45	1.2222	42.111	1.2407	43.198	1.2593	44.309	1.2778	45.444	1.2963	46.605	45
46	1.2407	43.494	1.2593	44.593	1.2778	45.716	1.2963	46.864	1.3148	48.037	46
47	1.2593	44.901	1.2778	46.012	1.2963	47.148	1.3148	48.309	1.3333	49.494	47
48	1.2778	46.333	1.2963	47.457	1.3148	48.605	1.3333	49.778	1.3519	50.975	48
49	1.2963	47.790	1.3148	48.926	1.3333	50.086	1.3519	51.272	1.3704	52.481	49
50	1.3148	49.272	1.3333	50.420	1.3519	51.593	1.3704	52.790	1.3889	54.012	50
	21		22		23		24		25		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	8.346	.5000	9.000	.5185	9.679	.5370	10.383	.5556	11.111	0
1	.5000	8.679	.5185	9.346	.5370	10.037	.5556	10.753	.5741	11.494	1
2	.5185	9.037	.5370	9.716	.5556	10.420	.5741	11.148	.5926	11.901	2
3	.5370	9.420	.5556	10.111	.5741	10.827	.5926	11.568	.6111	12.333	3
4	.5556	9.827	.5741	10.531	.5926	11.259	.6111	12.012	.6296	12.790	4
5	.5741	10.259	.5926	10.975	.6111	11.716	.6296	12.481	.6481	13.272	5
6	.5926	10.716	.6111	11.444	.6296	12.198	.6481	12.975	.6667	13.778	6
7	.6111	11.198	.6296	11.938	.6481	12.704	.6667	13.494	.6852	14.309	7
8	.6296	11.704	.6481	12.457	.6667	13.235	.6852	14.037	.7037	14.864	8
9	.6481	12.235	.6667	13.000	.6852	13.790	.7037	14.605	.7222	15.444	9
10	.6667	12.790	.6852	13.568	.7037	14.370	.7222	15.198	.7407	16.049	10
11	.6852	13.370	.7037	14.160	.7222	14.975	.7407	15.815	.7593	16.679	11
12	.7037	13.975	.7222	14.778	.7407	15.605	.7593	16.457	.7778	17.333	12
13	.7222	14.605	.7407	15.420	.7593	16.259	.7778	17.123	.7963	18.012	13
14	.7407	15.259	.7593	16.086	.7778	16.938	.7963	17.815	.8148	18.716	14
15	.7593	15.938	.7778	16.778	.7963	17.642	.8148	18.531	.8333	19.444	15
16	.7778	16.642	.7963	17.494	.8148	18.370	.8333	19.272	.8519	20.198	16
17	.7963	17.370	.8148	18.235	.8333	19.123	.8519	20.037	.8704	20.975	17
18	.8148	18.123	.8333	19.000	.8519	19.901	.8704	20.827	.8889	21.778	18
19	.8333	18.901	.8519	19.790	.8704	20.704	.8889	21.642	.9074	22.605	19
20	.8519	19.704	.8704	20.605	.8889	21.531	.9074	22.481	.9259	23.457	20
21	.8704	20.531	.8889	21.444	.9074	22.383	.9259	23.346	.9444	24.333	21
22	.8889	21.383	.9074	22.309	.9259	23.259	.9444	24.235	.9630	25.235	22
23	.9074	22.259	.9259	23.198	.9444	24.160	.9630	25.148	.9815	26.160	23
24	.9259	23.160	.9444	24.111	.9630	25.086	.9815	26.086	1.0000	27.111	24
25	.9444	24.086	.9630	25.049	.9815	26.037	1.0000	27.049	1.0185	28.086	25
26	.9630	25.037	.9815	26.012	1.0000	27.012	1.0185	28.037	1.0370	29.086	26
27	.9815	26.012	1.0000	27.000	1.0185	28.012	1.0370	29.049	1.0556	30.111	27
28	1.0000	27.012	1.0185	28.012	1.0370	29.037	1.0556	30.086	1.0741	31.160	28
29	1.0185	28.037	1.0370	29.049	1.0556	30.086	1.0741	31.148	1.0926	32.235	29
30	1.0370	29.086	1.0556	30.111	1.0741	31.160	1.0926	32.235	1.1111	33.333	30
31	1.0556	30.160	1.0741	31.198	1.0926	32.259	1.1111	33.346	1.1296	34.457	31
32	1.0741	31.259	1.0926	32.309	1.1111	33.383	1.1296	34.481	1.1481	35.605	32
33	1.0926	32.383	1.1111	33.444	1.1296	34.531	1.1481	35.642	1.1667	36.778	33
34	1.1111	33.531	1.1296	34.605	1.1481	35.704	1.1667	36.827	1.1852	37.975	34
35	1.1296	34.704	1.1481	35.790	1.1667	36.901	1.1852	38.037	1.2047	39.198	35
36	1.1481	35.901	1.1667	37.000	1.1852	38.123	1.2047	39.272	1.2222	40.444	36
37	1.1667	37.123	1.1852	38.235	1.2047	39.370	1.2222	40.531	1.2407	41.716	37
38	1.1852	38.370	1.2047	39.494	1.2222	40.642	1.2407	41.815	1.2593	43.012	38
39	1.2047	39.642	1.2222	40.778	1.2407	41.938	1.2593	43.123	1.2778	44.333	39
40	1.2222	40.938	1.2407	42.086	1.2593	43.259	1.2778	44.457	1.2963	45.679	40
41	1.2407	42.259	1.2593	43.420	1.2778	44.605	1.2963	45.815	1.3148	47.049	41
42	1.2593	43.605	1.2778	44.778	1.2963	45.975	1.3148	47.198	1.3333	48.444	42
43	1.2778	44.975	1.2963	46.160	1.3148	47.370	1.3333	48.605	1.3519	49.864	43
44	1.2963	46.370	1.3148	47.568	1.3333	48.790	1.3519	50.037	1.3704	51.309	44
45	1.3148	47.790	1.3333	49.000	1.3519	50.235	1.3704	51.494	1.3889	52.778	45
46	1.3333	49.235	1.3519	50.457	1.3704	51.704	1.3889	52.975	1.4074	54.272	46
47	1.3519	50.704	1.3704	51.938	1.3889	53.198	1.4074	54.481	1.4259	55.790	47
48	1.3704	52.198	1.3889	53.444	1.4074	54.716	1.4259	56.012	1.4444	57.333	48
49	1.3889	53.716	1.4074	54.975	1.4259	56.259	1.4444	57.568	1.4630	58.901	59
50	1.4074	55.259	1.4259	56.531	1.4444	57.827	1.4630	59.148	1.4815	60.494	50
	26		27		28		29		30		

TABLE XXV.—BASE 1—SLOPES 1 to I.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	11.864	.5926	12.642	.6111	13.444	.6296	14.272	.6481	15.123	0
1	.5926	12.259	.6111	13.049	.6296	13.864	.6481	14.704	.6667	15.568	1
2	.6111	12.679	.6296	13.481	.6481	14.309	.6667	15.160	.6852	16.037	2
3	.6296	13.123	.6481	13.938	.6667	14.778	.6852	15.642	.7037	16.531	3
4	.6481	13.593	.6667	14.420	.6852	15.272	.7037	16.148	.7222	17.049	4
5	.6667	14.086	.6852	14.926	.7037	15.790	.7222	16.679	.7407	17.593	5
6	.6852	14.605	.7037	15.457	.7222	16.333	.7407	17.235	.7593	18.160	6
7	.7037	15.148	.7222	16.012	.7407	16.901	.7593	17.815	.7778	18.753	7
8	.7222	15.716	.7407	16.593	.7593	17.494	.7778	18.420	.7963	19.370	8
9	.7407	16.309	.7593	17.198	.7778	18.111	.7963	19.049	.8148	20.012	9
10	.7593	16.926	.7778	17.827	.7963	18.753	.8148	19.704	.8333	20.679	10
11	.7778	17.568	.7963	18.481	.8148	19.420	.8333	20.383	.8519	21.370	11
12	.7963	18.235	.8148	19.160	.8333	20.111	.8519	21.086	.8704	22.086	12
13	.8148	18.926	.8333	19.864	.8519	20.827	.8704	21.815	.8889	22.827	13
14	.8333	19.642	.8519	20.593	.8704	21.568	.8889	22.568	.9074	23.593	14
15	.8519	20.383	.8704	21.346	.8889	22.333	.9074	23.346	.9259	24.383	15
16	.8704	21.148	.8889	22.123	.9074	23.123	.9259	24.148	.9444	25.198	16
17	.8889	21.938	.9074	22.926	.9259	23.938	.9444	24.975	.9630	26.037	17
18	.9074	22.753	.9259	23.753	.9444	24.778	.9630	25.827	.9815	26.901	18
19	.9259	23.593	.9444	24.605	.9630	25.642	.9815	26.704	1.0000	27.790	19
20	.9444	24.457	.9630	25.481	.9815	26.531	1.0000	27.605	1.0185	28.704	20
21	.9630	25.346	.9815	26.383	1.0000	27.444	1.0185	28.531	1.0370	29.642	21
22	.9815	26.259	1.0000	27.309	1.0185	28.383	1.0370	29.481	1.0556	30.605	22
23	1.0000	27.198	1.0185	28.259	1.0370	29.346	1.0556	30.457	1.0741	31.593	23
24	1.0185	28.160	1.0370	29.235	1.0556	30.333	1.0741	31.457	1.0926	32.605	24
25	1.0370	29.148	1.0556	30.235	1.0741	31.346	1.0926	32.481	1.1111	33.642	25
26	1.0556	30.160	1.0741	31.259	1.0926	32.383	1.1111	33.531	1.1296	34.704	26
27	1.0741	31.198	1.0926	32.309	1.1111	33.444	1.1296	34.605	1.1481	35.790	27
28	1.0926	32.259	1.1111	33.383	1.1296	34.531	1.1481	35.704	1.1667	36.901	28
29	1.1111	33.346	1.1296	34.481	1.1481	35.642	1.1667	36.827	1.1852	38.037	29
30	1.1296	34.457	1.1481	35.605	1.1667	36.778	1.1852	37.975	1.2047	39.198	30
31	1.1481	35.593	1.1667	36.753	1.1852	37.938	1.2047	39.148	1.2222	40.383	31
32	1.1667	36.753	1.1852	37.926	1.2047	39.123	1.2222	40.346	1.2407	41.593	32
33	1.1852	37.938	1.2047	39.123	1.2222	40.333	1.2407	41.568	1.2593	42.827	33
34	1.2047	39.148	1.2222	40.346	1.2407	41.568	1.2593	42.815	1.2778	44.086	34
35	1.2222	40.383	1.2407	41.593	1.2593	42.827	1.2778	44.086	1.2963	45.370	35
36	1.2407	41.642	1.2593	42.864	1.2778	44.111	1.2963	45.383	1.3148	46.679	36
37	1.2593	42.926	1.2778	44.160	1.2963	45.420	1.3148	46.704	1.3333	48.012	37
38	1.2778	44.235	1.2963	45.481	1.3148	46.753	1.3333	48.049	1.3519	49.370	38
39	1.2963	45.568	1.3148	46.827	1.3333	48.111	1.3519	49.420	1.3704	50.753	39
40	1.3148	46.926	1.3333	48.198	1.3519	49.494	1.3704	50.815	1.3889	52.160	40
41	1.3333	48.309	1.3519	49.593	1.3704	50.901	1.3889	52.235	1.4074	53.593	41
42	1.3519	49.716	1.3704	51.012	1.3889	52.333	1.4074	53.679	1.4259	55.049	42
43	1.3704	51.148	1.3889	52.457	1.4074	53.790	1.4259	55.148	1.4444	56.531	43
44	1.3889	52.605	1.4074	53.926	1.4259	55.272	1.4444	56.642	1.4630	58.037	44
45	1.4074	54.086	1.4259	55.420	1.4444	56.778	1.4630	58.160	1.4815	59.568	45
46	1.4259	55.593	1.4444	56.938	1.4630	58.309	1.4815	59.704	1.5000	61.123	46
47	1.4444	57.123	1.4630	58.481	1.4815	59.864	1.5000	61.272	1.5185	62.704	47
48	1.4630	58.679	1.4815	60.049	1.5000	61.444	1.5185	62.864	1.5370	64.309	48
49	1.4815	60.259	1.5000	61.642	1.5185	63.049	1.5370	64.481	1.5556	65.938	49
50	1.5000	61.864	1.5185	63.259	1.5370	64.679	1.5556	66 125	1.5741	67.593	50
	31		32		33		34		35		

TABLE XXV.—BASE 1—SLOPES 1 to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	16.000	.6852	16.901	.7037	17.827	.7222	18.778	.7407	19.753	0
1	.6852	16.457	.7037	17.370	.7222	18.309	.7407	19.272	.7593	20.259	1
2	.7037	16.938	.7222	17.864	.7407	18.815	.7593	19.790	.7778	20.790	2
3	.7222	17.444	.7407	18.383	.7593	19.346	.7778	20.333	.7963	21.346	3
4	.7407	17.975	.7593	18.926	.7778	19.901	.7963	20.901	.8148	21.926	4
5	.7593	18.531	.7778	19.494	.7963	20.481	.8148	21.494	.8333	22.531	5
6	.7778	19.111	.7963	20.086	.8148	21.086	.8333	22.111	.8519	23.160	6
7	.7963	19.716	.8148	20.704	.8333	21.716	.8519	22.753	.8704	23.815	7
8	.8148	20.346	.8333	21.346	.8519	22.370	.8704	23.420	.8889	24.494	8
9	.8333	21.000	.8519	22.012	.8704	23.049	.8889	24.111	.9074	25.198	9
10	.8519	21.679	.8704	22.704	.8889	23.753	.9074	24.827	.9259	25.926	10
11	.8704	22.383	.8889	23.420	.9074	24.481	.9259	25.568	.9444	26.679	11
12	.8889	23.111	.9074	24.160	.9259	25.235	.9444	26.333	.9630	27.457	12
13	.9074	23.864	.9259	24.926	.9444	26.012	.9630	27.123	.9815	28.259	13
14	.9259	24.642	.9444	25.716	.9630	26.815	.9815	27.938	1.0000	29.086	14
15	.9444	25.444	.9630	26.531	.9815	27.642	1.0000	28.778	1.0185	29.938	15
16	.9630	26.272	.9815	27.370	1.0000	28.494	1.0185	29.642	1.0370	30.815	16
17	.9815	27.123	1.0000	28.235	1.0185	29.370	1.0370	30.531	1.0556	31.716	17
18	1.0000	28.000	1.0185	29.123	1.0370	30.272	1.0556	31.444	1.0741	32.642	18
19	1.0185	28.901	1.0370	30.037	1.0556	31.198	1.0741	32.383	1.0926	33.593	19
20	1.0370	29.827	1.0556	30.975	1.0741	32.148	1.0926	33.346	1.1111	34.568	20
21	1.0556	30.778	1.0741	31.938	1.0926	33.123	1.1111	34.333	1.1296	35.568	21
22	1.0741	31.753	1.0926	32.926	1.1111	34.123	1.1296	35.346	1.1481	36.593	22
23	1.0926	32.753	1.1111	33.938	1.1296	35.148	1.1481	36.383	1.1667	37.642	23
24	1.1111	33.778	1.1296	34.975	1.1481	36.198	1.1667	37.444	1.1852	38.716	24
25	1.1296	34.827	1.1481	36.037	1.1667	37.272	1.1852	38.531	1.2047	39.815	25
26	1.1481	35.901	1.1667	37.123	1.1852	38.370	1.2047	39.642	1.2222	40.938	26
27	1.1667	37.000	1.1852	38.235	1.2047	39.494	1.2222	40.778	1.2407	42.086	27
28	1.1852	38.123	1.2047	39.370	1.2222	40.642	1.2407	41.938	1.2593	43.259	28
29	1.2047	39.272	1.2222	40.531	1.2407	41.815	1.2593	43.123	1.2778	44.457	29
30	1.2222	40.444	1.2407	41.716	1.2593	43.012	1.2778	44.333	1.2963	45.679	30
31	1.2407	41.642	1.2593	42.926	1.2778	44.235	1.2963	45.568	1.3148	46.926	31
32	1.2593	42.864	1.2778	44.160	1.2963	45.481	1.3148	46.827	1.3333	48.198	32
33	1.2778	44.111	1.2963	45.420	1.3148	46.753	1.3333	48.111	1.3519	49.494	33
34	1.2963	45.383	1.3148	46.704	1.3333	48.049	1.3519	49.420	1.3704	50.815	34
35	1.3148	46.679	1.3333	48.012	1.3519	49.370	1.3704	50.753	1.3889	52.160	35
36	1.3333	48.000	1.3519	49.346	1.3704	50.716	1.3889	52.111	1.4074	53.531	36
37	1.3519	49.346	1.3704	50.704	1.3889	52.086	1.4074	53.494	1.4259	54.926	37
38	1.3704	50.716	1.3889	52.086	1.4074	53.481	1.4259	54.901	1.4444	56.346	38
39	1.3889	52.111	1.4074	53.494	1.4259	54.901	1.4444	56.333	1.4630	57.790	39
40	1.4074	53.531	1.4259	54.926	1.4444	56.346	1.4630	57.790	1.4815	59.259	40
41	1.4259	54.975	1.4444	56.383	1.4630	57.815	1.4815	59.272	1.5000	60.753	41
42	1.4444	56.444	1.4630	57.864	1.4815	59.309	1.5000	60.778	1.5185	62.272	42
43	1.4630	57.938	1.4815	59.370	1.5000	60.827	1.5185	62.309	1.5370	63.815	43
44	1.4815	59.457	1.5000	60.901	1.5185	62.370	1.5370	63.864	1.5556	65.383	44
45	1.5000	61.000	1.5185	62.457	1.5370	63.938	1.5556	65.444	1.5741	66.975	45
46	1.5185	62.568	1.5370	64.037	1.5556	65.531	1.5741	67.049	1.5926	68.593	46
47	1.5370	64.160	1.5556	65.642	1.5741	67.148	1.5926	68.679	1.6111	70.235	47
48	1.5556	65.778	1.5741	67.272	1.5926	68.790	1.6111	70.333	1.6296	71.901	48
49	1.5741	67.420	1.5926	68.926	1.6111	70.457	1.6296	72.012	1.6481	73.593	49
50	1.5926	69.086	1.6111	70.605	1.6296	72.148	1.6481	73.716	1.6667	75.309	50
	36		37		38		39		40		

TABLE XXV.—BASE I—SLOPES 1 to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	20.753	.7778	21.778	.7963	22.827	.8148	23.901	.8333	25.000	0
1	.7778	21.272	.7963	22.309	.8148	23.370	.8333	24.457	.8519	25.568	1
2	.7963	21.815	.8148	22.864	.8333	23.938	.8519	25.037	.8704	26.160	2
3	.8148	22.383	.8333	23.444	.8519	24.531	.8704	25.642	.8889	26.778	3
4	.8333	22.975	.8519	24.049	.8704	25.148	.8889	26.272	.9074	27.420	4
5	.8519	23.593	.8704	24.679	.8889	25.790	.9074	26.926	.9259	28.086	5
6	.8704	24.235	.8889	25.333	.9074	26.457	.9259	27.605	.9444	28.778	6
7	.8889	24.901	.9074	26.012	.9259	27.148	.9444	28.309	.9630	29.494	7
8	.9074	25.593	.9259	26.716	.9444	27.864	.9630	29.037	.9815	30.235	8
9	.9259	26.309	.9444	27.444	.9630	28.605	.9815	29.790	1.0000	31.000	9
10	.9444	27.049	.9630	28.198	.9815	29.370	1.0000	30.568	1.0185	31.790	10
11	.9630	27.815	.9815	28.975	1.0000	30.160	1.0185	31.370	1.0370	32.605	11
12	.9815	28.605	1.0000	29.778	1.0185	30.975	1.0370	32.198	1.0556	33.444	12
13	1.0000	29.420	1.0185	30.605	1.0370	31.815	1.0556	33.049	1.0741	34.309	13
14	1.0185	30.259	1.0370	31.457	1.0556	32.679	1.0741	33.926	1.0926	35.198	14
15	1.0370	31.123	1.0556	32.333	1.0741	33.568	1.0926	34.827	1.1111	36.111	15
16	1.0556	32.012	1.0741	33.235	1.0926	34.481	1.1111	35.753	1.1296	37.049	16
17	1.0741	32.926	1.0926	34.160	1.1111	35.420	1.1296	36.704	1.1481	38.012	17
18	1.0926	33.864	1.1111	35.111	1.1296	36.383	1.1481	37.679	1.1667	39.000	18
19	1.1111	34.827	1.1296	36.086	1.1481	37.370	1.1667	38.679	1.1852	40.012	19
20	1.1296	35.815	1.1481	37.086	1.1667	38.383	1.1852	39.704	1.2047	41.049	20
21	1.1481	36.827	1.1667	38.111	1.1852	39.420	1.2047	40.753	1.2222	42.111	21
22	1.1667	37.864	1.1852	39.160	1.2047	40.481	1.2222	41.827	1.2407	43.198	22
23	1.1852	38.926	1.2047	40.235	1.2222	41.568	1.2407	42.926	1.2593	44.309	23
24	1.2047	40.012	1.2222	41.333	1.2407	42.679	1.2593	44.049	1.2778	45.444	24
25	1.2222	41.123	1.2407	42.457	1.2593	43.815	1.2778	45.198	1.2963	46.605	25
26	1.2407	42.259	1.2593	43.605	1.2778	44.975	1.2963	46.370	1.3148	47.790	26
27	1.2593	43.420	1.2778	44.778	1.2963	46.160	1.3148	47.568	1.3333	49.000	27
28	1.2778	44.605	1.2963	45.975	1.3148	47.370	1.3333	48.790	1.3519	50.235	28
29	1.2963	45.815	1.3148	47.198	1.3333	48.605	1.3519	50.037	1.3704	51.494	29
30	1.3148	47.049	1.3333	48.444	1.3519	49.864	1.3704	51.309	1.3889	52.778	30
31	1.3333	48.309	1.3519	49.716	1.3704	51.148	1.3889	52.605	1.4074	54.086	31
32	1.3519	49.593	1.3704	51.012	1.3889	52.457	1.4074	53.926	1.4259	55.420	32
33	1.3704	50.901	1.3889	52.333	1.4074	53.790	1.4259	55.272	1.4444	56.778	33
34	1.3889	52.235	1.4074	53.679	1.4259	55.148	1.4444	56.642	1.4630	58.160	34
35	1.4074	53.593	1.4259	55.049	1.4444	56.531	1.4630	58.037	1.4815	59.568	35
36	1.4259	54.975	1.4444	56.444	1.4630	57.938	1.4815	59.457	1.5000	61.000	36
37	1.4444	56.383	1.4630	57.864	1.4815	59.370	1.5000	60.901	1.5185	62.457	37
38	1.4630	57.815	1.4815	59.309	1.5000	60.827	1.5185	62.370	1.5370	63.938	38
39	1.4815	59.272	1.5000	60.778	1.5185	62.309	1.5370	63.864	1.5556	65.444	39
40	1.5000	60.753	1.5185	62.272	1.5370	63.815	1.5556	65.383	1.5741	66.975	40
41	1.5185	62.259	1.5370	63.790	1.5556	65.346	1.5741	66.926	1.5926	68.531	41
42	1.5370	63.790	1.5556	65.333	1.5741	66.901	1.5926	68.494	1.6111	70.111	42
43	1.5556	65.346	1.5741	66.901	1.5926	68.481	1.6111	70.086	1.6296	71.716	43
44	1.5741	66.926	1.5926	68.494	1.6111	70.086	1.6296	71.704	1.6481	73.346	44
45	1.5926	68.531	1.6111	70.111	1.6296	71.716	1.6481	73.346	1.6667	75.000	45
46	1.6111	70.160	1.6296	71.753	1.6481	73.370	1.6667	75.012	1.6852	76.679	46
47	1.6296	71.815	1.6481	73.420	1.6667	75.049	1.6852	76.704	1.7037	78.383	47
48	1.6481	73.494	1.6667	75.111	1.6852	76.753	1.7037	78.420	1.7222	80.111	48
49	1.6667	75.198	1.6852	76.827	1.7037	78.481	1.7222	80.160	1.7407	81.864	49
50	1.6852	76.926	1.7037	78.568	1.7222	80.235	1.7407	81.926	1.7593	83.642	50
	41		42		43		44		45		

TABLE XXV.—BASE I—SLOPES 1 to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	26.123	.8704	27.272	.8889	28.444	.9074	29.642	.9259	30.864	0
1	.8704	26.704	.8889	27.864	.9074	29.049	.9259	30.259	.9444	31.494	1
2	.8889	27.309	.9074	28.481	.9259	29.679	.9444	30.901	.9630	32.148	2
3	.9074	27.938	.9259	29.123	.9444	30.333	.9630	31.568	.9815	32.827	3
4	.9259	28.593	.9444	29.790	.9630	31.012	.9815	32.259	1.0000	33.531	4
5	.9444	29.272	.9630	30.481	.9815	31.716	1.0000	32.975	1.0185	34.259	5
6	.9630	29.975	.9815	31.198	1.0000	32.444	1.0185	33.716	1.0370	35.012	6
7	.9815	30.704	1.0000	31.938	1.0185	33.198	1.0370	34.481	1.0556	35.790	7
8	1.0000	31.457	1.0185	32.704	1.0370	33.975	1.0556	35.272	1.0741	36.593	8
9	1.0185	32.235	1.0370	33.494	1.0556	34.778	1.0741	36.086	1.0926	37.420	9
10	1.0370	33.037	1.0556	34.309	1.0741	35.605	1.0926	36.926	1.1111	38.272	10
11	1.0556	33.864	1.0741	35.148	1.0926	36.457	1.1111	37.790	1.1296	39.148	11
12	1.0741	34.716	1.0926	36.012	1.1111	37.333	1.1296	38.679	1.1481	40.049	12
13	1.0926	35.593	1.1111	36.901	1.1296	38.235	1.1481	39.593	1.1667	40.975	13
14	1.1111	36.494	1.1296	37.815	1.1481	39.160	1.1667	40.531	1.1852	41.926	14
15	1.1296	37.420	1.1481	38.753	1.1667	40.111	1.1852	41.494	1.2047	42.901	15
16	1.1481	38.370	1.1667	39.716	1.1852	41.086	1.2047	42.481	1.2222	43.901	16
17	1.1667	39.346	1.1852	40.704	1.2047	42.086	1.2222	43.494	1.2407	44.926	17
18	1.1852	40.346	1.2047	41.716	1.2222	43.111	1.2407	44.531	1.2593	45.975	18
19	1.2047	41.370	1.2222	42.753	1.2407	44.160	1.2593	45.593	1.2778	47.049	19
20	1.2222	42.420	1.2407	43.815	1.2593	45.235	1.2778	46.679	1.2963	48.148	20
21	1.2407	43.494	1.2593	44.901	1.2778	46.333	1.2963	47.790	1.3148	49.272	21
22	1.2593	44.593	1.2778	46.012	1.2963	47.457	1.3148	48.926	1.3333	50.420	22
23	1.2778	45.716	1.2963	47.148	1.3148	48.605	1.3333	50.086	1.3519	51.593	23
24	1.2963	46.864	1.3148	48.309	1.3333	49.778	1.3519	51.272	1.3704	52.790	24
25	1.3148	48.037	1.3333	49.494	1.3519	50.975	1.3704	52.481	1.3889	54.012	25
26	1.3333	49.235	1.3519	50.704	1.3704	52.198	1.3889	53.716	1.4074	55.259	26
27	1.3519	50.457	1.3704	51.938	1.3889	53.444	1.4074	54.975	1.4259	56.531	27
28	1.3704	51.704	1.3889	53.198	1.4074	54.716	1.4259	56.259	1.4444	57.827	28
29	1.3889	52.975	1.4074	54.481	1.4259	56.012	1.4444	57.568	1.4630	59.148	29
30	1.4074	54.272	1.4259	55.790	1.4444	57.333	1.4630	58.901	1.4815	60.494	30
31	1.4259	55.593	1.4444	57.123	1.4630	58.679	1.4815	60.259	1.5000	61.864	31
32	1.4444	56.938	1.4630	58.481	1.4815	60.049	1.5000	61.642	1.5185	63.259	32
33	1.4630	58.309	1.4815	59.864	1.5000	61.444	1.5185	63.049	1.5370	64.679	33
34	1.4815	59.704	1.5000	61.272	1.5185	62.864	1.5370	64.481	1.5556	66.123	34
35	1.5000	61.123	1.5185	62.704	1.5370	64.309	1.5556	65.938	1.5741	67.593	35
36	1.5185	62.568	1.5370	64.160	1.5556	65.778	1.5741	67.420	1.5926	69.086	36
37	1.5370	64.037	1.5556	65.642	1.5741	67.272	1.5926	68.926	1.6111	70.605	37
38	1.5556	65.531	1.5741	67.148	1.5926	68.790	1.6111	70.457	1.6296	72.148	38
39	1.5741	67.049	1.5926	68.679	1.6111	70.333	1.6296	72.012	1.6481	73.716	39
40	1.5926	68.593	1.6111	70.235	1.6296	71.901	1.6481	73.593	1.6667	75.309	40
41	1.6111	70.160	1.6296	71.815	1.6481	73.494	1.6667	75.198	1.6852	76.926	41
42	1.6296	71.753	1.6481	73.420	1.6667	75.111	1.6852	76.827	1.7037	78.568	42
43	1.6481	73.370	1.6667	75.049	1.6852	76.753	1.7037	78.481	1.7222	80.235	43
44	1.6667	75.012	1.6852	76.704	1.7037	78.420	1.7222	80.160	1.7407	81.926	44
45	1.6852	76.679	1.7037	78.383	1.7222	80.111	1.7407	81.864	1.7593	83.642	45
46	1.7037	78.370	1.7222	80.086	1.7407	81.827	1.7593	83.593	1.7778	85.383	46
47	1.7222	80.086	1.7407	81.815	1.7593	83.568	1.7778	85.346	1.7963	87.148	47
48	1.7407	81.827	1.7593	83.568	1.7778	85.333	1.7963	87.123	1.8148	88.938	48
49	1.7593	83.593	1.7778	85.346	1.7963	87.123	1.8148	88.926	1.8333	90.753	49
50	1.7778	85.383	1.7963	87.148	1.8148	88.938	1.8333	90.753	1.8519	92.593	50
	46		47		48		49		50		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	.015	.0370	.062	.0556	.139	.0741	.247	.0926	.386	0
1	.0370	.046	.0556	.108	.0741	.201	.0926	.324	.1111	.478	1
2	.0556	.108	.0741	.185	.0926	.293	.1111	.432	.1296	.602	2
3	.0741	.201	.0926	.293	.1111	.417	.1296	.571	.1481	.756	3
4	.0926	.324	.1111	.432	.1296	.571	.1481	.741	.1667	.941	4
5	.1111	.478	.1296	.602	.1481	.756	.1667	.941	.1852	1.157	5
6	.1296	.664	.1481	.802	.1667	.972	.1852	1.173	.2047	1.404	6
7	.1481	.880	.1667	1.034	.1852	1.219	.2047	1.435	.2222	1.682	7
8	.1667	1.127	.1852	1.296	.2047	1.497	.2222	1.728	.2407	1.991	8
9	.1852	1.404	.2047	1.590	.2222	1.806	.2407	2.052	.2593	2.330	9
10	.2047	1.713	.2222	1.914	.2407	2.145	.2593	2.407	.2778	2.701	10
11	.2222	2.052	.2407	2.269	.2593	2.514	.2778	2.793	.2963	3.102	11
12	.2407	2.423	.2593	2.654	.2778	2.917	.2963	3.210	.3148	3.534	12
13	.2593	2.824	.2778	3.071	.2963	3.349	.3148	3.657	.3333	3.997	13
14	.2778	3.256	.2963	3.519	.3148	3.812	.3333	4.136	.3519	4.491	14
15	.2963	3.719	.3148	3.997	.3333	4.306	.3519	4.645	.3704	5.015	15
16	.3148	4.213	.3333	4.506	.3519	4.830	.3704	5.185	.3889	5.571	16
17	.3333	4.740	.3519	5.046	.3704	5.386	.3889	5.756	.4074	6.157	17
18	.3519	5.293	.3704	5.617	.3889	5.972	.4074	6.358	.4259	6.775	18
19	.3704	5.880	.3889	6.219	.4074	6.590	.4259	6.991	.4444	7.423	19
20	.3889	6.497	.4074	6.852	.4259	7.238	.4444	7.654	.4630	8.102	20
21	.4074	7.145	.4259	7.515	.4444	7.917	.4630	8.349	.4815	8.812	21
22	.4259	7.824	.4444	8.210	.4630	8.627	.4815	9.074	.5000	9.552	22
23	.4444	8.534	.4630	8.935	.4815	9.367	.5000	9.830	.5185	10.324	23
24	.4630	9.275	.4815	9.691	.5000	10.139	.5185	10.617	.5370	11.127	24
25	.4815	10.046	.5000	10.478	.5185	10.941	.5370	11.435	.5556	11.960	25
26	.5000	10.849	.5185	11.296	.5370	11.775	.5556	12.284	.5741	12.824	26
27	.5185	11.682	.5370	12.145	.5556	12.639	.5741	13.164	.5926	13.719	27
28	.5370	12.546	.5556	13.027	.5741	13.534	.5926	14.074	.6111	14.645	28
29	.5556	13.441	.5741	13.935	.5926	14.460	.6111	15.015	.6296	15.602	29
30	.5741	14.367	.5926	14.877	.6111	15.417	.6296	15.988	.6481	16.590	30
31	.5926	15.324	.6111	15.849	.6296	16.404	.6481	16.991	.6667	17.608	31
32	.6111	16.318	.6296	16.852	.6481	17.423	.6667	18.025	.6852	18.657	32
33	.6296	17.330	.6481	17.886	.6667	18.472	.6852	19.090	.7037	19.738	33
34	.6481	18.380	.6667	18.951	.6852	19.552	.7037	20.185	.7222	20.849	34
35	.6667	19.460	.6852	20.046	.7037	20.664	.7222	21.312	.7407	21.991	35
36	.6852	20.571	.7037	21.173	.7222	21.806	.7407	22.469	.7593	23.164	36
37	.7037	21.713	.7222	22.330	.7407	22.978	.7593	23.657	.7778	24.367	37
38	.7222	22.886	.7407	23.519	.7593	24.182	.7778	24.877	.7963	25.602	38
39	.7407	24.090	.7593	24.738	.7778	25.417	.7963	26.127	.8148	26.867	39
40	.7593	25.324	.7778	25.988	.7963	26.682	.8148	27.407	.8333	28.164	40
41	.7778	26.590	.7963	27.269	.8148	27.978	.8333	28.719	.8519	29.491	41
42	.7963	27.886	.8148	28.580	.8333	29.306	.8519	30.062	.8704	30.849	42
43	.8148	29.213	.8333	29.923	.8519	30.664	.8704	31.435	.8889	32.238	43
44	.8333	30.571	.8519	31.296	.8704	32.052	.8889	32.840	.9074	33.657	44
45	.8519	31.960	.8704	32.701	.8889	33.472	.9074	34.275	.9259	35.108	45
46	.8704	33.380	.8889	34.136	.9074	34.923	.9259	35.741	.9444	36.590	46
47	.8889	34.830	.9074	35.602	.9259	36.404	.9444	37.238	.9630	38.102	47
48	.9074	36.318	.9259	37.099	.9444	37.917	.9630	38.765	.9815	39.645	48
49	.9259	37.824	.9444	38.627	.9630	39.460	.9815	40.324	1.0000	41.219	49
50	.9444	39.367	.9630	40.185	.9815	41.034	1.0000	41.914	1.0185	42.824	50
	1		2		3		4		5		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{2}$ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	.556	.1296	756	.1481	.988	.1667	1.250	.1852	1.543	0
1	.1296	.664	.1481	.880	.1667	1.127	.1852	1.404	.2047	1.713	1
2	.1481	.802	.1667	1.034	.1852	1.296	.2047	1.590	.2222	1.914	2
3	.1667	.972	.1852	1.219	.2047	1.497	.2222	1.806	.2407	2.145	3
4	.1852	1.173	.2047	1.435	.2222	1.728	.2407	2.052	.2593	2.407	4
5	.2047	1.404	.2222	1.682	.2407	1.991	.2593	2.350	.2778	2.701	5
6	.2222	1.667	.2407	1.960	.2593	2.284	.2778	2.639	.2963	3.025	6
7	.2407	1.960	.2593	2.269	.2778	2.608	.2963	2.978	.3148	3.380	7
8	.2593	2.284	.2778	2.608	.2963	2.963	.3148	3.349	.3333	3.765	8
9	.2778	2.639	.2963	2.978	.3148	3.349	.3333	3.750	.3519	4.182	9
10	.2963	3.025	.3148	3.380	.3333	3.765	.3519	4.182	.3704	4.630	10
11	.3148	3.441	.3333	3.812	.3519	4.213	.3704	4.645	.3889	5.108	11
12	.3333	3.889	.3519	4.275	.3704	4.691	.3889	5.139	.4074	5.617	12
13	.3519	4.367	.3704	4.769	.3889	5.201	.4074	5.664	.4259	6.157	13
14	.3704	4.877	.3889	5.293	.4074	5.741	.4259	6.219	.4444	6.728	14
15	.3889	5.417	.4074	5.849	.4259	6.312	.4444	6.806	.4630	7.330	15
16	.4074	5.988	.4259	6.435	.4444	6.914	.4630	7.423	.4815	7.963	16
17	.4259	6.590	.4444	7.052	.4630	7.546	.4815	8.071	.5000	8.627	17
18	.4444	7.222	.4630	7.701	.4815	8.210	.5000	8.750	.5185	9.321	18
19	.4630	7.886	.4815	8.380	.5000	8.904	.5185	9.460	.5370	10.046	19
20	.4815	8.580	.5000	9.090	.5185	9.630	.5370	10.201	.5556	10.802	20
21	.5000	9.306	.5185	9.830	.5370	10.386	.5556	10.972	.5741	11.590	21
22	.5185	10.062	.5370	10.602	.5556	11.173	.5741	11.775	.5926	12.407	22
23	.5370	10.849	.5556	11.404	.5741	11.991	.5926	12.608	.6111	13.256	23
24	.5556	11.667	.5741	12.238	.5926	12.840	.6111	13.472	.6296	14.136	24
25	.5741	12.515	.5926	13.102	.6111	13.719	.6296	14.367	.6481	15.046	25
26	.5926	13.395	.6111	13.997	.6296	14.630	.6481	15.293	.6667	15.988	26
27	.6111	14.306	.6296	14.923	.6481	15.571	.6667	16.250	.6852	16.960	27
28	.6296	15.247	.6481	15.880	.6667	16.543	.6852	17.238	.7037	17.963	28
29	.6481	16.219	.6667	16.867	.6852	17.546	.7037	18.256	.7222	18.997	29
30	.6667	17.222	.6852	17.886	.7037	18.580	.7222	19.306	.7407	20.062	30
31	.6852	18.256	.7037	18.935	.7222	19.645	.7407	20.386	.7593	21.157	31
32	.7037	19.321	.7222	20.015	.7407	20.741	.7593	21.497	.7778	22.284	32
33	.7222	20.417	.7407	21.127	.7593	21.867	.7778	22.639	.7963	23.441	33
34	.7407	21.543	.7593	22.269	.7778	23.025	.7963	23.812	.8148	24.630	34
35	.7593	22.701	.7778	23.441	.7963	24.213	.8148	25.015	.8333	25.849	35
36	.7778	23.889	.7963	24.645	.8148	25.432	.8333	26.250	.8519	27.099	36
37	.7963	25.108	.8148	25.880	.8333	26.682	.8519	27.515	.8704	28.380	37
38	.8148	26.358	.8333	27.145	.8519	27.963	.8704	28.812	.8889	29.691	38
39	.8333	27.639	.8519	28.441	.8704	29.275	.8889	30.139	.9074	31.034	39
40	.8519	28.951	.8704	29.769	.8889	30.617	.9074	31.497	.9259	32.407	40
41	.8704	30.293	.8889	31.127	.9074	31.991	.9259	32.886	.9444	33.812	41
42	.8889	31.667	.9074	32.515	.9259	33.395	.9444	34.306	.9630	35.247	42
43	.9074	33.071	.9259	33.935	.9444	34.830	.9630	35.756	.9815	36.713	43
44	.9259	34.506	.9444	35.386	.9630	36.296	.9815	37.238	1.0000	38.210	44
45	.9444	35.972	.9630	36.867	.9815	37.793	1.0000	38.750	1.0185	39.738	45
46	.9630	37.469	.9815	38.380	1.0000	39.321	1.0185	40.293	1.0370	41.296	46
47	.9815	38.997	1.0000	39.923	1.0185	40.880	1.0370	41.867	1.0556	42.886	47
48	1.0000	40.556	1.0185	41.497	1.0370	42.469	1.0556	43.472	1.0741	44.506	48
49	1.0185	42.145	1.0370	43.102	1.0556	44.090	1.0741	45.108	1.0926	46.157	49
50	1.0370	43.765	1.0556	44.738	1.0741	45.741	1.0926	46.775	1.1111	47.840	50
	6		7		8		9		10		

TABLE XXVI.—BASE 1—SLOPES 1¼ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	1.867	.2222	2.222	.2407	2.608	.2593	3.025	.2778	3.472	0
1	.2222	2.052	.2407	2.423	.2593	2.824	.2778	3.256	.2963	3.719	1
2	.2407	2.269	.2593	2.654	.2778	3.071	.2963	3.519	.3148	3.997	2
3	.2593	2.514	.2778	2.917	.2963	3.349	.3148	3.812	.3333	4.306	3
4	.2778	2.793	.2963	3.210	.3148	3.657	.3333	4.136	.3519	4.645	4
5	.2963	3.102	.3148	3.534	.3333	3.997	.3519	4.491	.3704	5.015	5
6	.3148	3.441	.3333	3.889	.3519	4.367	.3704	4.877	.3889	5.417	6
7	.3335	3.812	.3519	4.275	.3704	4.769	.3889	5.293	.4074	5.849	7
8	.3519	4.213	.3704	4.691	.3889	5.201	.4074	5.741	.4259	6.312	8
9	.3704	4.645	.3889	5.139	.4074	5.664	.4259	6.219	.4444	6.806	9
10	.3889	5.108	.4074	5.617	.4259	6.157	.4444	6.728	.4630	7.330	10
11	.4074	5.602	.4259	6.127	.4444	6.682	.4630	7.269	.4815	7.886	11
12	.4259	6.127	.4444	6.667	.4630	7.238	.4815	7.840	.5000	8.472	12
13	.4444	6.682	.4630	7.238	.4815	7.824	.5000	8.441	.5185	9.090	13
14	.4630	7.269	.4815	7.840	.5000	8.441	.5185	9.074	.5370	9.738	14
15	.4815	7.886	.5000	8.472	.5185	9.090	.5370	9.738	.5556	10.417	15
16	.5000	8.534	.5185	9.136	.5370	9.769	.5556	10.432	.5741	11.127	16
17	.5185	9.213	.5370	9.830	.5556	10.478	.5741	11.157	.5926	11.867	17
18	.5370	9.923	.5556	10.556	.5741	11.219	.5926	11.914	.6111	12.639	18
19	.5556	10.664	.5741	11.312	.5926	11.991	.6111	12.701	.6296	13.441	19
20	.5741	11.435	.5926	12.099	.6111	12.793	.6296	13.519	.6481	14.275	20
21	.5926	12.238	.6111	12.917	.6296	13.627	.6481	14.367	.6667	15.139	21
22	.6111	13.071	.6296	13.765	.6481	14.491	.6667	15.247	.6852	16.034	22
23	.6296	13.935	.6481	14.645	.6667	15.386	.6852	16.157	.7037	16.960	23
24	.6481	14.830	.6667	15.556	.6852	16.312	.7037	17.099	.7222	17.917	24
25	.6667	15.756	.6852	16.497	.7037	17.269	.7222	18.071	.7407	18.904	25
26	.6852	16.713	.7037	17.469	.7222	18.256	.7407	19.074	.7593	19.923	26
27	.7037	17.701	.7222	18.472	.7407	19.275	.7593	20.108	.7778	20.972	27
28	.7222	18.719	.7407	19.506	.7593	20.324	.7778	21.173	.7963	22.052	28
29	.7407	19.769	.7593	20.571	.7778	21.404	.7963	22.269	.8148	23.164	29
30	.7593	20.849	.7778	21.667	.7963	22.515	.8148	23.395	.8333	24.306	30
31	.7778	21.960	.7963	22.793	.8148	23.657	.8333	24.552	.8519	25.478	31
32	.7963	23.102	.8148	23.951	.8333	24.830	.8519	25.741	.8704	26.682	32
33	.8148	24.275	.8333	25.139	.8519	26.034	.8704	26.960	.8889	27.917	33
34	.8333	25.478	.8519	26.358	.8704	27.269	.8889	28.210	.9074	29.182	34
35	.8519	26.713	.8704	27.608	.8889	28.534	.9074	29.491	.9259	30.478	35
36	.8704	27.978	.8889	28.889	.9074	29.830	.9259	30.802	.9444	31.806	36
37	.8889	29.275	.9074	30.201	.9259	31.157	.9444	32.145	.9630	33.164	37
38	.9074	30.602	.9259	31.543	.9444	32.515	.9630	33.519	.9815	34.552	38
39	.9259	31.960	.9444	32.917	.9630	33.904	.9815	34.923	1.0000	35.972	39
40	.9444	33.349	.9630	34.321	.9815	35.324	1.0000	36.358	1.0185	37.423	40
41	.9630	34.769	.9815	35.756	1.0000	36.775	1.0185	37.824	1.0370	38.904	41
42	.9815	36.219	1.0000	37.222	1.0185	38.256	1.0370	39.321	1.0556	40.417	42
43	1.0000	37.701	1.0185	38.719	1.0370	39.769	1.0556	40.849	1.0741	41.960	43
44	1.0185	39.213	1.0370	40.247	1.0556	41.312	1.0741	42.407	1.0926	43.534	44
45	1.0370	40.756	1.0556	41.806	1.0741	42.886	1.0926	43.997	1.1111	45.139	45
46	1.0556	42.330	1.0741	43.395	1.0926	44.491	1.1111	45.617	1.1296	46.775	46
47	1.0741	43.935	1.0926	45.015	1.1111	46.127	1.1296	47.269	1.1481	48.441	47
48	1.0926	45.571	1.1111	46.667	1.1296	47.793	1.1481	48.951	1.1667	50.139	48
49	1.1111	47.238	1.1296	48.349	1.1481	49.491	1.1667	50.664	1.1852	51.867	49
50	1.1296	48.935	1.1481	50.062	1.1667	51.219	1.1852	52.407	1.2047	53.627	50
	11		12		13		14		15		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	3.951	.3148	4.460	.3333	5.000	.3519	5.571	.3704	6.173	0
1	.3148	4.213	.3333	4.740	.3519	5.293	.3704	5.880	.3889	6.497	1
2	.3333	4.506	.3519	5.046	.3704	5.617	.3889	6.219	.4074	6.852	2
3	.3519	4.830	.3704	5.386	.3889	5.972	.4074	6.590	.4259	7.238	3
4	.3704	5.185	.3889	5.756	.4074	6.358	.4259	6.991	.4444	7.654	4
5	.3889	5.571	.4074	6.157	.4259	6.775	.4444	7.423	.4630	8.102	5
6	.4074	5.988	.4259	6.590	.4444	7.222	.4630	7.886	.4815	8.580	6
7	.4259	6.435	.4444	7.052	.4630	7.701	.4815	8.380	.5000	9.090	7
8	.4444	6.914	.4630	7.546	.4815	8.210	.5000	8.904	.5185	9.630	8
9	.4630	7.423	.4815	8.071	.5000	8.750	.5185	9.460	.5370	10.201	9
10	.4815	7.963	.5000	8.627	.5185	9.321	.5370	10.046	.5556	10.802	10
11	.5000	8.534	.5185	9.213	.5370	9.923	.5556	10.664	.5741	11.435	11
12	.5185	9.136	.5370	9.830	.5556	10.556	.5741	11.312	.5926	12.099	12
13	.5370	9.769	.5556	10.478	.5741	11.219	.5926	11.991	.6111	12.793	13
14	.5556	10.432	.5741	11.157	.5926	11.914	.6111	12.701	.6296	13.519	14
15	.5741	11.127	.5926	11.867	.6111	12.639	.6296	13.441	.6481	14.275	15
16	.5926	11.852	.6111	12.608	.6296	13.395	.6481	14.213	.6667	15.062	16
17	.6111	12.608	.6296	13.380	.6481	14.182	.6667	15.015	.6852	15.880	17
18	.6296	13.395	.6481	14.182	.6667	15.000	.6852	15.849	.7037	16.728	18
19	.6481	14.213	.6667	15.015	.6852	15.849	.7037	16.713	.7222	17.608	19
20	.6667	15.062	.6852	15.880	.7037	16.728	.7222	17.608	.7407	18.519	20
21	.6852	15.941	.7037	16.775	.7222	17.639	.7407	18.534	.7593	19.460	21
22	.7037	16.852	.7222	17.701	.7407	18.580	.7593	19.491	.7778	20.432	22
23	.7222	17.793	.7407	18.657	.7593	19.552	.7778	20.478	.7963	21.435	23
24	.7407	18.765	.7593	19.645	.7778	20.556	.7963	21.497	.8148	22.469	24
25	.7593	19.769	.7778	20.664	.7963	21.590	.8148	22.546	.8333	23.534	25
26	.7778	20.802	.7963	21.713	.8148	22.654	.8333	23.627	.8519	24.630	26
27	.7963	21.867	.8148	22.793	.8333	23.750	.8519	24.738	.8704	25.756	27
28	.8148	22.963	.8333	23.904	.8519	24.877	.8704	25.880	.8889	26.914	28
29	.8333	24.090	.8519	25.046	.8704	26.034	.8889	27.052	.9074	28.102	29
30	.8519	25.247	.8704	26.219	.8889	27.222	.9074	28.256	.9259	29.321	30
31	.8704	26.435	.8889	27.423	.9074	28.441	.9259	29.491	.9444	30.571	31
32	.8889	27.654	.9074	28.657	.9259	29.691	.9444	30.756	.9630	31.852	32
33	.9074	28.904	.9259	29.923	.9444	30.972	.9630	32.052	.9815	33.164	33
34	.9259	30.185	.9444	31.219	.9630	32.284	.9815	33.380	1.0000	34.506	34
35	.9444	31.497	.9630	32.546	.9815	33.627	1.0000	34.738	1.0185	35.880	35
36	.9630	32.840	.9815	33.904	1.0000	35.000	1.0185	36.127	1.0370	37.284	36
37	.9815	34.213	1.0000	35.293	1.0185	36.404	1.0370	37.546	1.0556	38.719	37
38	1.0000	35.617	1.0185	36.713	1.0370	37.840	1.0556	38.997	1.0741	40.185	38
39	1.0185	37.052	1.0370	38.164	1.0556	39.306	1.0741	40.478	1.0926	41.682	39
40	1.0370	38.519	1.0556	39.645	1.0741	40.802	1.0926	41.991	1.1111	43.210	40
41	1.0556	40.015	1.0741	41.157	1.0926	42.330	1.1111	43.534	1.1296	44.769	41
42	1.0741	41.543	1.0926	42.701	1.1111	43.889	1.1296	45.108	1.1481	46.358	42
43	1.0926	43.102	1.1111	44.275	1.1296	45.478	1.1481	46.713	1.1667	47.978	43
44	1.1111	44.691	1.1296	45.880	1.1481	47.099	1.1667	48.349	1.1852	49.630	44
45	1.1296	46.312	1.1481	47.515	1.1667	48.750	1.1852	50.015	1.2047	51.312	45
46	1.1481	47.963	1.1667	49.182	1.1852	50.432	1.2047	51.713	1.2222	53.025	46
47	1.1667	49.645	1.1852	50.880	1.2047	52.145	1.2222	53.441	1.2407	54.769	47
48	1.1852	51.358	1.2047	52.608	1.2222	53.889	1.2407	55.201	1.2593	56.543	48
49	1.2047	53.102	1.2222	54.367	1.2407	55.664	1.2593	56.991	1.2778	58.349	49
50	1.2222	54.877	1.2407	56.157	1.2593	57.469	1 2778	58.812	1.2963	60.185	50
	16		17		18		19		20		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	6.806	.4074	7.469	.4259	8.164	.4444	8.889	.4630	9.645	0
1	.4074	7.145	.4259	7.824	.4444	8.534	.4630	9.275	.4815	10.046	1
2	.4259	7.515	.4444	8.210	.4630	8.935	.4815	9.691	.5000	10.478	2
3	.4444	7.917	.4630	8.627	.4815	9.367	.5000	10.139	.5185	10.941	3
4	.4630	8.349	.4815	9.074	.5000	9.830	.5185	10.617	.5370	11.435	4
5	.4815	8.812	.5000	9.552	.5185	10.324	.5370	11.127	.5556	11.960	5
6	.5000	9.306	.5185	10.062	.5370	10.849	.5556	11.667	.5741	12.515	6
7	.5185	9.830	.5370	10.602	.5556	11.404	.5741	12.238	.5926	13.102	7
8	.5370	10.386	.5556	11.173	.5741	11.991	.5926	12.840	.6111	13.719	8
9	.5556	10.972	.5741	11.775	.5926	12.608	.6111	13.472	.6296	14.367	9
10	.5741	11.590	.5926	12.407	.6111	13.256	.6296	14.136	.6481	15.046	10
11	.5926	12.238	.6111	13.071	.6296	13.935	.6481	14.830	.6667	15.756	11
12	.6111	12.917	.6296	13.765	.6481	14.645	.6667	15.556	.6852	16.497	12
13	.6296	13.627	.6481	14.491	.6667	15.386	.6852	16.312	.7037	17.269	13
14	.6481	14.367	.6667	15.247	.6852	16.157	.7037	17.099	.7222	18.071	14
15	.6667	15.139	.6852	16.034	.7037	16.960	.7222	17.917	.7407	18.904	15
16	.6852	15.941	.7037	16.852	.7222	17.793	.7407	18.765	.7593	19.769	16
17	.7037	16.775	.7222	17.701	.7407	18.657	.7593	19.645	.7778	20.664	17
18	.7222	17.639	.7407	18.580	.7593	19.552	.7778	20.556	.7963	21.590	18
19	.7407	18.534	.7593	19.491	.7778	20.478	.7963	21.497	.8148	22.546	19
20	.7593	19.460	.7778	20.432	.7963	21.435	.8148	22.469	.8333	23.534	20
21	.7778	20.417	.7963	21.404	.8148	22.423	.8333	23.472	.8519	24.552	21
22	.7963	21.404	.8148	22.407	.8333	23.441	.8519	24.506	.8704	25.602	22
23	.8148	22.423	.8333	23.441	.8519	24.491	.8704	25.571	.8889	26.682	23
24	.8333	23.472	.8519	24.506	.8704	25.571	.8889	26.667	.9074	27.793	24
25	.8519	24.552	.8704	25.602	.8889	26.682	.9074	27.793	.9259	28.935	25
26	.8704	25.664	.8889	26.728	.9074	27.824	.9259	28.951	.9444	30.108	26
27	.8889	26.806	.9074	27.886	.9259	28.997	.9444	30.139	.9630	31.312	27
28	.9074	27.978	.9259	29.074	.9444	30.201	.9630	31.358	.9815	32.546	28
29	.9259	29.182	.9444	30.293	.9630	31.435	.9815	32.608	1.0000	33.812	29
30	.9444	30.417	.9630	31.543	.9815	32.701	1.0000	33.889	1.0185	35.108	30
31	.9630	31.682	.9815	32.824	1.0000	33.997	1.0185	35.201	1.0370	36.435	31
32	.9815	32.978	1.0000	34.136	1.0185	35.324	1.0370	36.543	1.0556	37.793	32
33	1.0000	34.306	1.0185	35.478	1.0370	36.682	1.0556	37.917	1.0741	39.182	33
34	1.0185	35.664	1.0370	36.852	1.0556	38.071	1.0741	39.321	1.0926	40.602	34
35	1.0370	37.052	1.0556	38.256	1.0741	39.491	1.0926	40.756	1.1111	42.052	35
36	1.0556	38.472	1.0741	39.691	1.0926	40.941	1.1111	42.222	1.1296	43.534	36
37	1.0741	39.923	1.0926	41.157	1.1111	42.423	1.1296	43.719	1.1481	45.046	37
38	1.0926	41.404	1.1111	42.654	1.1296	43.935	1.1481	45.247	1.1667	46.590	38
39	1.1111	42.917	1.1296	44.182	1.1481	45.478	1.1667	46.806	1.1852	48.164	39
40	1.1296	44.460	1.1481	45.741	1.1667	47.052	1.1852	48.395	1.2047	49.769	40
41	1.1481	46.034	1.1667	47.330	1.1852	48.657	1.2047	50.015	1.2222	51.404	41
42	1.1667	47.639	1.1852	48.951	1.2047	50.293	1.2222	51.667	1.2407	53.071	42
43	1.1852	49.275	1.2047	50.602	1.2222	51.960	1.2407	53.349	1.2593	54.769	43
44	1.2047	50.941	1.2222	52.284	1.2407	53.657	1.2593	55.062	1.2778	56.497	44
45	1.2222	52.639	1.2407	53.997	1.2593	55.386	1.2778	56.806	1.2963	58.256	45
46	1.2407	54.367	1.2593	55.741	1.2778	57.145	1.2963	58.580	1.3148	60.046	46
47	1.2593	56.127	1.2778	57.515	1.2963	58.935	1.3148	60.386	1.3333	61.867	47
48	1.2778	57.917	1.2963	59.321	1.3148	60.756	1.3333	62.222	1.3519	63.719	48
49	1.2963	59.738	1.3148	61.157	1.3333	62.608	1.3519	64.090	1.3704	65.602	49
50	1.3148	61.590	1.3333	63.025	1.3519	64.491	1.3704	65.988	1.3889	67.515	50
	21		22		23		24		25		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	10.432	.5000	11.250	.5185	12.099	.5370	12.978	.5556	13.889	0
1	.5000	10.849	.5185	11.682	.5370	12.546	.5556	13.441	.5741	14.367	1
2	.5185	11.296	.5370	12.145	.5556	13.027	.5741	13.935	.5926	14.877	2
3	.5370	11.775	.5556	12.639	.5741	13.534	.5926	14.460	.6111	15.417	3
4	.5556	12.284	.5741	13.164	.5926	14.074	.6111	15.015	.6296	15.988	4
5	.5741	12.824	.5926	13.719	.6111	14.645	.6296	15.602	.6481	16.590	5
6	.5926	13.395	.6111	14.306	.6296	15.247	.6481	16.219	.6667	17.222	6
7	.6111	13.997	.6296	14.923	.6481	15.880	.6667	16.867	.6852	17.886	7
8	.6296	14.630	.6481	15.571	.6667	16.543	.6852	17.546	.7037	18.580	8
9	.6481	15.293	.6667	16.250	.6852	17.238	.7037	18.256	.7222	19.306	9
10	.6667	15.988	.6852	16.960	.7037	17.963	.7222	18.997	.7407	20.062	10
11	.6852	16.713	.7037	17.701	.7222	18.719	.7407	19.769	.7593	20.849	11
12	.7037	17.469	.7222	18.472	.7407	19.506	.7593	20.571	.7778	21.667	12
13	.7222	18.256	.7407	19.275	.7593	20.324	.7778	21.404	.7963	22.515	13
14	.7407	19.074	.7593	20.108	.7778	21.173	.7963	22.269	.8148	23.395	14
15	.7593	19.923	.7778	20.972	.7963	22.052	.8148	23.164	.8333	24.306	15
16	.7778	20.802	.7963	21.867	.8148	22.963	.8333	24.090	.8519	25.247	16
17	.7963	21.713	.8148	22.793	.8333	23.904	.8519	25.046	.8704	26.219	17
18	.8148	22.654	.8333	23.750	.8519	24.877	.8704	26.034	.8889	27.222	18
19	.8333	23.627	.8519	24.738	.8704	25.880	.8889	27.052	.9074	28.256	19
20	.8519	24.630	.8704	25.756	.8889	26.914	.9074	28.102	.9259	29.321	20
21	.8704	25.664	.8889	26.806	.9074	27.978	.9259	29.182	.9444	30.417	21
22	.8889	26.728	.9074	27.886	.9259	29.074	.9444	30.293	.9630	31.543	22
23	.9074	27.824	.9259	28.997	.9444	30.201	.9630	31.435	.9815	32.701	23
24	.9259	28.951	.9444	30.139	.9630	31.358	.9815	32.608	1.0000	33.889	24
25	.9444	30.108	.9630	31.312	.9815	32.546	1.0000	33.812	1.0185	35.108	25
26	.9630	31.296	.9815	32.515	1.0000	33.765	1.0185	35.046	1.0370	36.358	26
27	.9815	32.515	1.0000	33.750	1.0185	35.015	1.0370	36.312	1.0556	37.639	27
28	1.0000	33.765	1.0185	35.015	1.0370	36.296	1.0556	37.608	1.0741	38.951	28
29	1.0185	35.046	1.0370	36.312	1.0556	37.608	1.0741	38.935	1.0926	40.293	29
30	1.0370	36.358	1.0556	37.639	1.0741	38.951	1.0926	40.293	1.1111	41.667	30
31	1.0556	37.701	1.0741	38.997	1.0926	40.324	1.1111	41.682	1.1296	43.071	31
32	1.0741	39.074	1.0926	40.386	1.1111	41.728	1.1296	43.102	1.1481	44.506	32
33	1.0926	40.478	1.1111	41.806	1.1296	43.164	1.1481	44.552	1.1667	45.972	33
34	1.1111	41.914	1.1296	43.256	1.1481	44.630	1.1667	46.034	1.1852	47.469	34
35	1.1296	43.380	1.1481	44.738	1.1667	46.127	1.1852	47.546	1.2047	48.997	35
36	1.1481	44.877	1.1667	46.250	1.1852	47.654	1.2047	49.090	1.2222	50.556	36
37	1.1667	46.404	1.1852	47.793	1.2047	49.213	1.2222	50.664	1.2407	52.145	37
38	1.1852	47.963	1.2047	49.367	1.2222	50.802	1.2407	52.269	1.2593	53.765	38
39	1.2047	49.552	1.2222	50.972	1.2407	52.423	1.2593	53.904	1.2778	55.417	39
40	1.2222	51.173	1.2407	52.608	1.2593	54.074	1.2778	55.571	1.2963	57.099	40
41	1.2407	52.824	1.2593	54.275	1.2778	55.756	1.2963	57.269	1.3148	58.812	41
42	1.2593	54.506	1.2778	55.972	1.2963	57.469	1.3148	58.997	1.3333	60.556	42
43	1.2778	56.219	1.2963	57.701	1.3148	59.213	1.3333	60.756	1.3519	62.330	43
44	1.2963	57.963	1.3148	59.460	1.3333	60.988	1.3519	62.546	1.3704	64.136	44
45	1.3148	59.738	1.3333	61.250	1.3519	62.793	1.3704	64.367	1.3889	65.972	45
46	1.3333	61.543	1.3519	63.071	1.3704	64.630	1.3889	66.219	1.4074	67.840	46
47	1.3519	63.380	1.3704	64.923	1.3889	66.497	1.4074	68.102	1.4259	69.738	47
48	1.3704	65.247	1.3889	66.806	1.4074	68.395	1.4259	70.015	1.4444	71.667	48
49	1.3889	67.145	1.4074	68.719	1.4259	70.324	1.4444	71.960	1.4630	73.627	59
50	1.4074	69.074	1.4259	70.664	1.4444	72.284	1.4630	73.935	1.4815	75.617	50
	26		27		28		29		30		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	14.830	.5926	15.802	.6111	16.806	.6296	17.840	.6481	18.904	0
1	.5926	15.324	.6111	16.318	.6296	17.330	.6481	18.380	.6667	19.460	1
2	.6111	15.849	.6296	16.852	.6481	17.886	.6667	18.951	.6852	20.046	2
3	.6296	16.404	.6481	17.425	.6667	18.472	.6852	19.552	.7037	20.664	3
4	.6481	16.991	.6667	18.025	.6852	19.090	.7037	20.185	.7222	21.312	4
5	.6667	17.608	.6852	18.657	.7037	19.738	.7222	20.849	.7407	21.991	5
6	.6852	18.256	.7037	19.321	.7222	20.417	.7407	21.543	.7593	22.701	6
7	.7037	18.935	.7222	20.015	.7407	21.127	.7593	22.269	.7778	23.441	7
8	.7222	19.645	.7407	20.741	.7593	21.867	.7778	23.025	.7963	24.213	8
9	.7407	20.386	.7593	21.497	.7778	22.639	.7963	23.812	.8148	25.015	9
10	.7593	21.157	.7778	22.284	.7963	23.441	.8148	24.630	.8333	25.849	10
11	.7778	21.960	.7963	23.102	.8148	24.275	.8333	25.478	.8519	26.713	11
12	.7963	22.793	.8148	23.951	.8333	25.139	.8519	26.358	.8704	27.608	12
13	.8148	23.657	.8333	24.830	.8519	26.034	.8704	27.269	.8889	28.534	13
14	.8333	24.552	.8519	25.741	.8704	26.960	.8889	28.210	.9074	29.491	14
15	.8519	25.478	.8704	26.682	.8889	27.917	.9074	29.182	.9259	30.478	15
16	.8704	26.435	.8889	27.654	.9074	28.904	.9259	30.185	.9444	31.497	16
17	.8889	27.423	.9074	28.657	.9259	29.923	.9444	31.219	.9630	32.546	17
18	.9074	28.441	.9259	29.691	.9444	30.972	.9630	32.284	.9815	33.627	18
19	.9259	29.491	.9444	30.756	.9630	32.052	.9815	33.380	1.0000	34.738	19
20	.9444	30.571	.9630	31.852	.9815	33.164	1.0000	34.506	1.0185	35.880	20
21	.9630	31.682	.9815	32.978	1.0000	34.306	1.0185	35.664	1.0370	37.052	21
22	.9815	32.824	1.0000	34.136	1.0185	35.478	1.0370	36.852	1.0556	38.256	22
23	1.0000	33.997	1.0185	35.324	1.0370	36.682	1.0556	38.071	1.0741	39.491	23
24	1.0185	35.201	1.0370	36.543	1.0556	37.917	1.0741	39.321	1.0926	40.756	24
25	1.0370	36.435	1.0556	37.793	1.0741	39.182	1.0926	40.602	1.1111	42.052	25
26	1.0556	37.701	1.0741	39.074	1.0926	40.478	1.1111	41.914	1.1296	43.380	26
27	1.0741	38.997	1.0926	40.386	1.1111	41.806	1.1296	43.256	1.1481	44.738	27
28	1.0926	40.324	1.1111	41.728	1.1296	43.164	1.1481	44.630	1.1667	46.127	28
29	1.1111	41.682	1.1296	43.102	1.1481	44.552	1.1667	46.034	1.1852	47.546	29
30	1.1296	43.071	1.1481	44.506	1.1667	45.972	1.1852	47.469	1.2047	48.997	30
31	1.1481	44.491	1.1667	45.941	1.1852	47.423	1.2047	48.935	1.2222	50.478	31
32	1.1667	45.941	1.1852	47.407	1.2047	48.904	1.2222	50.432	1.2407	51.991	32
33	1.1852	47.423	1.2047	48.904	1.2222	50.417	1.2407	51.960	1.2593	53.534	33
34	1.2047	48.935	1.2222	50.432	1.2407	51.960	1.2593	53.519	1.2778	55.108	34
35	1.2222	50.478	1.2407	51.991	1.2593	53.534	1.2778	55.108	1.2963	56.713	35
36	1.2407	52.052	1.2593	53.580	1.2778	55.139	1.2963	56.728	1.3148	58.349	36
37	1.2593	53.657	1.2778	55.201	1.2963	56.775	1.3148	58.380	1.3333	60.015	37
38	1.2778	55.293	1.2963	56.852	1.3148	58.441	1.3333	60.062	1.3519	61.713	38
39	1.2963	56.960	1.3148	58.534	1.3333	60.139	1.3519	61.775	1.3704	63.441	39
40	1.3148	58.657	1.3333	60.247	1.3519	61.867	1.3704	63.519	1.3889	65.201	40
41	1.3333	60.386	1.3519	61.991	1.3704	63.627	1.3889	65.293	1.4074	66.991	41
42	1.3519	62.145	1.3704	63.765	1.3889	65.417	1.4074	67.099	1.4259	68.812	42
43	1.3704	63.935	1.3889	65.571	1.4074	67.238	1.4259	68.935	1.4444	70.664	43
44	1.3889	65.756	1.4074	67.407	1.4259	69.090	1.4444	70.802	1.4630	72.546	44
45	1.4074	67.608	1.4259	69.275	1.4444	70.972	1.4630	72.701	1.4815	74.460	45
46	1.4259	69.491	1.4444	71.173	1.4630	72.886	1.4815	74.630	1.5000	76.404	46
47	1.4444	71.404	1.4630	73.102	1.4815	74.830	1.5000	76.590	1.5185	78.380	47
48	1.4630	73.349	1.4815	75.062	1.5000	76.806	1.5185	78.580	1.5370	80.386	48
49	1.4815	75.324	1.5000	77.052	1.5185	78.812	1.5370	80.602	1.5556	82.423	49
50	1.5000	77.330	1.5185	79.074	1.5370	80.849	1.5556	82.654	1.5741	84.491	50
	31		32		33		34		35		

TABLE XXVI.—BASE 1—SLOPES $1\frac{1}{4}$ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	20.000	.6852	21.127	.7037	22.284	.7222	23.472	.7407	24.691	0
1	.6852	20.571	.7037	21.713	.7222	22.886	.7407	24.090	.7593	25.324	1
2	.7037	21.173	.7222	22.330	.7407	25.519	.7593	24.738	.7778	25.988	2
3	.7222	21.806	.7407	22.978	.7593	24.182	.7778	25.417	.7963	26.682	3
4	.7407	22.469	.7593	23.657	.7778	24.877	.7963	26.127	.8148	27.407	4
5	.7593	23.164	.7778	24.367	.7963	25.602	.8148	26.867	.8333	28.164	5
6	.7778	23.889	.7963	25.108	.8148	26.358	.8333	27.639	.8519	28.951	6
7	.7963	24.645	.8148	25.880	.8333	27.145	.8519	28.441	.8704	29.769	7
8	.8148	25.432	.8333	26.682	.8519	27.963	.8704	29.275	.8889	30.617	8
9	.8333	26.250	.8519	27.515	.8704	28.812	.8889	30.139	.9074	31.497	9
10	.8519	27.099	.8704	28.380	.8889	29.691	.9074	31.034	.9259	32.407	10
11	.8704	27.978	.8889	29.275	.9074	30.602	.9259	31.960	.9444	33.349	11
12	.8889	28.889	.9074	30.201	.9259	31.543	.9444	32.917	.9630	34.321	12
13	.9074	29.830	.9259	31.157	.9444	32.515	.9630	33.904	.9815	35.324	13
14	.9259	30.802	.9444	32.145	.9630	33.519	.9815	34.923	1.0000	36.358	14
15	.9444	31.806	.9630	33.164	.9815	34.552	1.0000	35.972	1.0185	37.423	15
16	.9630	32.840	.9815	34.213	1.0000	35.617	1.0185	37.052	1.0370	38.519	16
17	.9815	33.904	1.0000	35.293	1.0185	36.713	1.0370	38.164	1.0556	39.645	17
18	1.0000	35.000	1.0185	36.404	1.0370	37.840	1.0556	39.306	1.0741	40.802	18
19	1.0185	36.127	1.0370	37.546	1.0556	38.997	1.0741	40.478	1.0926	41.991	19
20	1.0370	37.284	1.0556	38.719	1.0741	40.185	1.0926	41.682	1.1111	43.210	20
21	1.0556	38.472	1.0741	39.923	1.0926	41.404	1.1111	42.917	1.1296	44.460	21
22	1.0741	39.691	1.0926	41.157	1.1111	42.654	1.1296	44.182	1.1481	45.741	22
23	1.0926	40.941	1.1111	42.423	1.1296	43.935	1.1481	45.478	1.1667	47.052	23
24	1.1111	42.222	1.1296	43.719	1.1481	45.247	1.1667	46.806	1.1852	48.395	24
25	1.1296	43.534	1.1481	45.046	1.1667	46.590	1.1852	48.164	1.2047	49.769	25
26	1.1481	44.877	1.1667	46.404	1.1852	47.963	1.2047	49.552	1.2222	51.173	26
27	1.1667	46.250	1.1852	47.793	1.2047	49.367	1.2222	50.972	1.2407	52.608	27
28	1.1852	47.654	1.2047	49.213	1.2222	50.802	1.2407	52.423	1.2593	54.074	28
29	1.2047	49.090	1.2222	50.664	1.2407	52.269	1.2593	53.904	1.2778	55.571	29
30	1.2222	50.556	1.2407	52.145	1.2593	53.765	1.2778	55.417	1.2963	57.099	30
31	1.2407	52.052	1.2593	53.657	1.2778	55.293	1.2963	56.960	1.3148	58.657	31
32	1.2593	53.580	1.2778	55.201	1.2963	56.852	1.3148	58.534	1.3333	60.247	32
33	1.2778	55.139	1.2963	56.775	1.3148	58.441	1.3335	60.139	1.3519	61.867	33
34	1.2963	56.728	1.3148	58.380	1.3333	60.062	1.3519	61.775	1.3704	63.519	34
35	1.3148	58.349	1.3333	60.015	1.3519	61.713	1.3704	63.441	1.3889	65.201	35
36	1.3333	60.000	1.3519	61.682	1.3704	63.395	1.3889	65.139	1.4074	66.914	36
37	1.3519	61.682	1.3704	63.380	1.3889	65.108	1.4074	66.867	1.4259	68.657	37
38	1.3704	63.395	1.3889	65.108	1.4074	66.852	1.4259	68.627	1.4444	70.432	38
39	1.3889	65.139	1.4074	66.867	1.4259	68.627	1.4444	70.417	1.4630	72.238	39
40	1.4074	66.914	1.4259	68.657	1.4444	70.432	1.4630	72.238	1.4815	74.074	40
41	1.4259	68.719	1.4444	70.478	1.4630	72.269	1.4815	74.090	1.5000	75.941	41
42	1.4444	70.556	1.4630	72.330	1.4815	74.136	1.5000	75.972	1.5185	77.840	42
43	1.4630	72.423	1.4815	74.213	1.5000	76.034	1.5185	77.886	1.5370	79.769	43
44	1.4815	74.321	1.5000	76.127	1.5185	77.963	1.5370	79.830	1.5556	81.728	44
45	1.5000	76.250	1.5185	78.071	1.5370	79.923	1.5556	81.806	1.5741	83.719	45
46	1.5185	78.210	1.5370	80.046	1.5556	81.914	1.5741	83.812	1.5926	85.741	46
47	1.5370	80.201	1.5556	82.052	1.5741	83.935	1.5926	85.849	1.6111	87.793	47
48	1.5556	82.222	1.5741	84.090	1.5926	85.988	1.6111	87.917	1.6296	89.877	48
49	1.5741	84.275	1.5926	86.157	1.6111	88.071	1.6296	90.015	1.6481	91.991	49
50	1.5926	86.358	1.6111	88.256	1.6296	90.185	1.6481	92.145	1.6667	94.136	50
	36		37		38		39		40		

TABLE XXVI.—BASE I—SLOPES $1\frac{1}{4}$ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	25.941	.7778	27.222	.7963	28.534	.8148	29.877	.8333	31.250	0
1	.7778	26.590	.7963	27.886	.8148	29.213	.8333	30.571	.8519	31.960	1
2	.7963	27.269	.8148	28.580	.8333	29.923	.8519	31.296	.8704	32.701	2
3	.8148	27.978	.8333	29.306	.8519	30.664	.8704	32.052	.8889	33.472	3
4	.8333	28.719	.8519	30.062	.8704	31.435	.8889	32.840	.9074	34.275	4
5	.8519	29.491	.8704	30.849	.8889	32.238	.9074	33.657	.9259	35.108	5
6	.8704	30.293	.8889	31.667	.9074	33.071	.9259	34.506	.9444	35.972	6
7	.8889	31.127	.9074	32.515	.9259	33.935	.9444	35.386	.9630	36.867	7
8	.9074	31.991	.9259	33.395	.9444	34.830	.9630	36.296	.9815	37.793	8
9	.9259	32.886	.9444	34.306	.9630	35.756	.9815	37.238	1.0000	38.750	9
10	.9444	33.812	.9630	35.247	.9815	36.713	1.0000	38.210	1.0185	39.738	10
11	.9630	34.769	.9815	36.219	1.0000	37.701	1.0185	39.213	1.0370	40.756	11
12	.9815	35.756	1.0000	37.222	1.0185	38.719	1.0370	40.247	1.0556	41.806	12
13	1.0000	36.775	1.0185	38.256	1.0370	39.769	1.0556	41.312	1.0741	42.886	13
14	1.0185	37.824	1.0370	39.321	1.0556	40.849	1.0741	42.407	1.0926	43.997	14
15	1.0370	38.904	1.0556	40.417	1.0741	41.960	1.0926	43.534	1.1111	45.139	15
16	1.0556	40.015	1.0741	41.543	1.0926	43.102	1.1111	44.691	1.1296	46.312	16
17	1.0741	41.157	1.0926	42.701	1.1111	44.275	1.1296	45.880	1.1481	47.515	17
18	1.0926	42.330	1.1111	43.889	1.1296	45.478	1.1481	47.099	1.1667	48.750	18
19	1.1111	43.534	1.1296	45.108	1.1481	46.713	1.1667	48.349	1.1852	50.015	19
20	1.1296	44.769	1.1481	46.358	1.1667	47.978	1.1852	49.630	1.2047	51.312	20
21	1.1481	46.034	1.1667	47.639	1.1852	49.275	1.2047	50.941	1.2222	52.639	21
22	1.1667	47.330	1.1852	48.951	1.2047	50.602	1.2222	52.284	1.2407	53.997	22
23	1.1852	48.657	1.2047	50.293	1.2222	51.960	1.2407	53.657	1.2593	55.386	23
24	1.2047	50.015	1.2222	51.667	1.2407	53.349	1.2593	55.062	1.2778	56.806	24
25	1.2222	51.404	1.2407	53.071	1.2593	54.769	1.2778	56.497	1.2963	58.256	25
26	1.2407	52.824	1.2593	54.506	1.2778	56.219	1.2963	57.963	1.3148	59.738	26
27	1.2593	54.275	1.2778	55.972	1.2963	57.701	1.3148	59.460	1.3333	61.250	27
28	1.2778	55.756	1.2963	57.469	1.3148	59.213	1.3333	60.988	1.3519	62.793	28
29	1.2963	57.269	1.3148	58.997	1.3333	60.756	1.3519	62.546	1.3704	64.367	29
30	1.3148	58.812	1.3333	60.556	1.3519	62.330	1.3704	64.136	1.3889	65.972	30
31	1.3333	60.386	1.3519	62.145	1.3704	63.935	1.3889	65.756	1.4074	67.608	31
32	1.3519	61.991	1.3704	63.765	1.3889	65.571	1.4074	67.407	1.4259	69.275	32
33	1.3704	63.627	1.3889	65.417	1.4074	67.238	1.4259	69.090	1.4444	70.972	33
34	1.3889	65.293	1.4074	67.099	1.4259	68.935	1.4444	70.802	1.4630	72.701	34
35	1.4074	66.991	1.4259	68.812	1.4444	70.664	1.4630	72.546	1.4815	74.460	35
36	1.4259	68.719	1.4444	70.556	1.4630	72.423	1.4815	74.321	1.5000	76.250	36
37	1.4444	70.478	1.4630	72.330	1.4815	74.213	1.5000	76.127	1.5185	78.071	37
38	1.4630	72.269	1.4815	74.136	1.5000	76.034	1.5185	77.963	1.5370	79.923	38
39	1.4815	74.090	1.5000	75.972	1.5185	77.886	1.5370	79.830	1.5556	81.806	39
40	1.5000	75.941	1.5185	77.840	1.5370	79.769	1.5556	81.728	1.5741	83.719	40
41	1.5185	77.824	1.5370	79.738	1.5556	81.682	1.5741	83.657	1.5926	85.664	41
42	1.5370	79.738	1.5556	81.667	1.5741	83.627	1.5926	85.617	1.6111	87.639	42
43	1.5556	81.682	1.5741	83.627	1.5926	85.602	1.6111	87.608	1.6296	89.645	43
44	1.5741	83.657	1.5926	85.617	1.6111	87.608	1.6296	89.630	1.6481	91.682	44
45	1.5926	85.664	1.6111	87.639	1.6296	89.645	1.6481	91.682	1.6667	93.750	45
46	1.6111	87.701	1.6296	89.691	1.6481	91.713	1.6667	93.765	1.6852	95.849	46
47	1.6296	89.769	1.6481	91.725	1.6667	93.812	1.6852	95.880	1.7037	97.978	47
48	1.6481	91.867	1.6667	93.889	1.6852	95.941	1.7037	98.025	1.7222	100.139	48
49	1.6667	93.997	1.6852	96.034	1.7037	98.102	1.7222	100.201	1.7407	102.330	49
50	1.6852	96.157	1.7037	98.210	1.7222	100.293	1.7407	102.407	1.7593	104.552	50
	41		42		43		44		45		

TABLE XXVI.—BASE I—SLOPES 1¼ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	32.654	.8704	34.090	.8889	35.556	.9074	37.052	.9259	38.580	0
1	.8704	33.380	.8889	34.830	.9074	36.318	.9259	37.824	.9444	39.367	1
2	.8889	34.136	.9074	35.602	.9259	37.099	.9444	38.627	.9630	40.185	2
3	.9074	34.923	.9259	36.404	.9444	37.917	.9630	39.460	.9815	41.034	3
4	.9259	35.741	.9444	37.238	.9630	38.765	.9815	40.324	1.0000	41.914	4
5	.9444	36.590	.9630	38.102	.9815	39.645	1.0000	41.219	1.0185	42.824	5
6	.9630	37.469	.9815	38.997	1.0000	40.556	1.0185	42.145	1.0370	43.765	6
7	.9815	38.380	1.0000	39.923	1.0185	41.497	1.0370	43.102	1.0556	44.738	7
8	1.0000	39.321	1.0185	40.880	1.0370	42.469	1.0556	44.090	1.0741	45.741	8
9	1.0185	40.293	1.0370	41.867	1.0556	43.472	1.0741	45.108	1.0926	46.775	9
10	1.0370	41.296	1.0556	42.886	1.0741	44.506	1.0926	46.157	1.1111	47.840	10
11	1.0556	42.330	1.0741	43.935	1.0926	45.571	1.1111	47.238	1.1296	48.935	11
12	1.0741	43.395	1.0926	45.015	1.1111	46.667	1.1296	48.349	1.1481	50.062	12
13	1.0926	44.491	1.1111	46.127	1.1296	47.793	1.1481	49.491	1.1667	51.219	13
14	1.1111	45.617	1.1296	47.269	1.1481	48.951	1.1667	50.664	1.1852	52.407	14
15	1.1296	46.775	1.1481	48.441	1.1667	50.139	1.1852	51.867	1.2047	53.627	15
16	1.1481	47.963	1.1667	49.645	1.1852	51.358	1.2047	53.102	1.2222	54.877	16
17	1.1667	49.182	1.1852	50.880	1.2047	52.608	1.2222	54.367	1.2407	56.157	17
18	1.1852	50.432	1.2047	52.145	1.2222	53.889	1.2407	55.664	1.2593	57.469	18
19	1.2047	51.713	1.2222	53.441	1.2407	55.201	1.2593	56.991	1.2778	58.812	19
20	1.2222	53.025	1.2407	54.769	1.2593	56.543	1.2778	58.349	1.2963	60.185	20
21	1.2407	54.367	1.2593	56.127	1.2778	57.917	1.2963	59.738	1.3148	61.590	21
22	1.2593	55.741	1.2778	57.515	1.2963	59.321	1.3148	61.157	1.3335	63.025	22
23	1.2778	57.145	1.2963	58.935	1.3148	60.756	1.3333	62.608	1.3519	64.491	23
24	1.2963	58.580	1.3148	60.386	1.3333	62.222	1.3519	64.090	1.3704	65.988	24
25	1.3148	60.046	1.3333	61.867	1.3519	63.719	1.3704	65.602	1.3889	67.515	25
26	1.3333	61.543	1.3519	63.380	1.3704	65.247	1.3889	67.145	1.4074	69.074	26
27	1.3519	63.071	1.3704	64.923	1.3889	66.806	1.4074	68.719	1.4259	70.664	27
28	1.3704	64.630	1.3889	66.497	1.4074	68.395	1.4259	70.324	1.4444	72.284	28
29	1.3889	66.219	1.4074	68.102	1.4259	70.015	1.4444	71.960	1.4630	73.935	29
30	1.4074	67.840	1.4259	69.738	1.4444	71.667	1.4630	73.627	1.4815	75.617	30
31	1.4259	69.491	1.4444	71.404	1.4630	73.349	1.4815	75.324	1.5000	77.330	31
32	1.4444	71.173	1.4630	73.102	1.4815	75.062	1.5000	77.052	1.5185	79.074	32
33	1.4630	72.886	1.4815	74.830	1.5000	76.806	1.5185	78.812	1.5370	80.849	33
34	1.4815	74.630	1.5000	76.590	1.5185	78.580	1.5370	80.602	1.5556	82.654	34
35	1.5000	76.404	1.5185	78.380	1.5370	80.386	1.5556	82.423	1.5741	84.491	35
36	1.5185	78.210	1.5370	80.201	1.5556	82.222	1.5741	84.275	1.5926	86.358	36
37	1.5370	80.046	1.5556	82.052	1.5741	84.090	1.5926	86.157	1.6111	88.256	37
38	1.5556	81.914	1.5741	83.935	1.5926	85.988	1.6111	88.071	1.6296	90.185	38
39	1.5741	83.812	1.5926	85.849	1.6111	87.917	1.6296	90.015	1.6481	92.145	39
40	1.5926	85.741	1.6111	87.793	1.6296	89.877	1.6481	91.991	1.6667	94.136	40
41	1.6111	87.701	1.6296	89.769	1.6481	91.867	1.6667	93.997	1.6852	96.157	41
42	1.6296	89.691	1.6481	91.725	1.6667	93.889	1.6852	96.034	1.7037	98.210	42
43	1.6481	91.713	1.6667	93.812	1.6852	95.941	1.7037	98.102	1.7222	100.293	43
44	1.6667	93.765	1.6852	95.880	1.7037	98.025	1.7222	100.201	1.7407	102.407	44
45	1.6852	95.849	1.7037	97.978	1.7222	100.139	1.7407	102.330	1.7593	104.552	45
46	1.7037	97.963	1.7222	100.108	1.7407	102.284	1.7593	104.491	1.7778	106.728	46
47	1.7222	100.108	1.7407	102.269	1.7593	104.460	1.7778	106.682	1.7963	108.935	47
48	1.7407	102.284	1.7593	104.460	1.7778	106.667	1.7963	108.904	1.8148	111.173	48
49	1.7593	104.491	1.7778	106.682	1.7963	108.904	1.8148	111.157	1.8333	113.441	49
50	1.7778	106.728	1.7963	108.935	1.8148	111.173	1.8333	113.441	1.8519	115.741	50
	46		47		48		49		50		

TABLE XXVII.—BASE 1—SLOPES $1\frac{1}{2}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	.019	.0370	.074	.0556	.167	.0741	.296	.0926	.463	0
1	.0370	.056	.0556	.130	.0741	.241	.0926	.389	.1111	.574	1
2	.0556	.130	.0741	.222	.0926	.352	.1111	.519	.1296	.722	2
3	.0741	.241	.0926	.352	.1111	.500	.1296	.685	.1481	.907	3
4	.0926	.389	.1111	.519	.1296	.685	.1481	.889	.1667	1.130	4
5	.1111	.574	.1296	.722	.1481	.907	.1667	1.130	.1852	1.389	5
6	.1296	.796	.1481	.963	.1667	1.167	.1852	1.407	.2047	1.685	6
7	.1481	1.056	.1667	1.241	.1852	1.463	.2047	1.722	.2222	2.019	7
8	.1667	1.352	.1852	1.556	.2047	1.796	.2222	2.074	.2407	2.389	8
9	.1852	1.685	.2047	1.907	.2222	2.167	.2407	2.463	.2593	2.796	9
10	.2047	2.056	.2222	2.296	.2407	2.574	.2593	2.889	.2778	3.241	10
11	.2222	2.463	.2407	2.722	.2593	3.019	.2778	3.352	.2963	3.722	11
12	.2407	2.907	.2593	3.185	.2778	3.500	.2963	3.852	.3148	4.241	12
13	.2593	3.389	.2778	3.685	.2963	4.019	.3148	4.389	.3333	4.796	13
14	.2778	3.907	.2963	4.222	.3148	4.574	.3333	4.963	.3519	5.389	14
15	.2963	4.463	.3148	4.796	.3333	5.167	.3519	5.574	.3704	6.019	15
16	.3148	5.056	.3333	5.407	.3519	5.796	.3704	6.222	.3889	6.685	16
17	.3333	5.685	.3519	6.056	.3704	6.463	.3889	6.907	.4074	7.389	17
18	.3519	6.352	.3704	6.741	.3889	7.167	.4074	7.630	.4259	8.130	18
19	.3704	7.056	.3889	7.463	.4074	7.907	.4259	8.389	.4444	8.907	19
20	.3889	7.796	.4074	8.222	.4259	8.685	.4444	9.185	.4630	9.722	20
21	.4074	8.574	.4259	9.019	.4444	9.500	.4630	10.019	.4815	10.574	21
22	.4259	9.389	.4444	9.852	.4630	10.352	.4815	10.889	.5000	11.463	22
23	.4444	10.241	.4630	10.722	.4815	11.241	.5000	11.796	.5185	12.389	23
24	.4630	11.130	.4815	11.630	.5000	12.167	.5185	12.741	.5370	13.352	24
25	.4815	12.056	.5000	12.574	.5185	13.130	.5370	13.722	.5556	14.352	25
26	.5000	13.019	.5185	13.556	.5370	14.130	.5556	14.741	.5741	15.389	26
27	.5185	14.019	.5370	14.574	.5556	15.167	.5741	15.796	.5926	16.463	27
28	.5370	15.056	.5556	15.630	.5741	16.241	.5926	16.889	.6111	17.574	28
29	.5556	16.130	.5741	16.722	.5926	17.352	.6111	18.019	.6296	18.722	29
30	.5741	17.241	.5926	17.852	.6111	18.500	.6296	19.185	.6481	19.907	30
31	.5926	18.389	.6111	19.019	.6296	19.685	.6481	20.389	.6667	21.130	31
32	.6111	19.574	.6296	20.222	.6481	20.907	.6667	21.630	.6852	22.389	32
33	.6296	20.796	.6481	21.463	.6667	22.167	.6852	22.907	.7037	23.685	33
34	.6481	22.056	.6667	22.741	.6852	23.463	.7037	24.222	.7222	25.019	34
35	.6667	23.352	.6852	24.056	.7037	24.796	.7222	25.574	.7407	26.389	35
36	.6852	24.685	.7037	25.407	.7222	26.167	.7407	26.963	.7593	27.796	36
37	.7037	26.056	.7222	26.796	.7407	27.574	.7593	28.389	.7778	29.241	37
38	.7222	27.463	.7407	28.222	.7593	29.019	.7778	29.852	.7963	30.722	38
39	.7407	28.907	.7593	29.685	.7778	30.500	.7963	31.352	.8148	32.241	39
40	.7593	30.389	.7778	31.185	.7963	32.019	.8148	32.889	.8333	33.796	40
41	.7778	31.907	.7963	32.722	.8148	33.574	.8333	34.463	.8519	35.389	41
42	.7963	33.463	.8148	34.296	.8333	35.167	.8519	36.074	.8704	37.019	42
43	.8148	35.056	.8333	35.907	.8519	36.796	.8704	37.722	.8889	38.685	43
44	.8333	36.685	.8519	37.556	.8704	38.463	.8889	39.407	.9074	40.389	44
45	.8519	38.352	.8704	39.241	.8889	40.167	.9074	41.130	.9259	42.130	45
46	.8704	40.056	.8889	40.963	.9074	41.907	.9259	42.889	.9444	43.907	46
47	.8889	41.796	.9074	42.722	.9259	43.685	.9444	44.685	.9630	45.722	47
48	.9074	43.574	.9259	44.519	.9444	45.500	.9630	46.519	.9815	47.574	48
49	.9259	45.389	.9444	46.352	.9630	47.352	.9815	48.389	1.0000	49.463	49
50	.9444	47.241	.9630	48.222	.9815	49.241	1.0000	50.296	1.0185	51.389	50
	1		2		3		4		5		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	.667	.1296	.907	.1481	1.185	.1667	1.500	.1852	1.852	0
1	.1296	.796	.1481	1.056	.1667	1.352	.1852	1.685	.2047	2.056	1
2	.1481	.963	.1667	1.241	.1852	1.556	.2047	1.907	.2222	2.296	2
3	.1667	1.167	.1852	1.463	.2047	1.796	.2222	2.167	.2407	2.574	3
4	.1852	1.407	.2047	1.722	.2222	2.074	.2407	2.463	.2593	2.889	4
5	.2047	1.685	.2222	2.019	.2407	2.389	.2593	2.796	.2778	3.241	5
6	.2222	2.000	.2407	2.352	.2593	2.741	.2778	3.167	.2963	3.630	6
7	.2407	2.352	.2593	2.722	.2778	3.130	.2963	3.574	.3148	4.056	7
8	.2593	2.741	.2778	3.130	.2963	3.556	.3148	4.019	.3333	4.519	8
9	.2778	3.167	.2963	3.574	.3148	4.019	.3333	4.500	.3519	5.019	9
10	.2963	3.630	.3148	4.056	.3333	4.519	.3519	5.019	.3704	5.556	10
11	.3148	4.130	.3333	4.574	.3519	5.056	.3704	5.574	.3889	6.130	11
12	.3333	4.667	.3519	5.130	.3704	5.630	.3889	6.167	.4074	6.741	12
13	.3519	5.241	.3704	5.722	.3889	6.241	.4074	6.796	.4259	7.389	13
14	.3704	5.852	.3889	6.352	.4074	6.889	.4259	7.463	.4444	8.074	14
15	.3889	6.500	.4074	7.019	.4259	7.574	.4444	8.167	.4630	8.796	15
16	.4074	7.185	.4259	7.722	.4444	8.296	.4630	8.907	.4815	9.556	16
17	.4259	7.907	.4444	8.463	.4630	9.056	.4815	9.685	.5000	10.352	17
18	.4444	8.667	.4630	9.241	.4815	9.852	.5000	10.500	.5185	11.185	18
19	.4630	9.463	.4815	10.056	.5000	10.685	.5185	11.352	.5370	12.056	19
20	.4815	10.296	.5000	10.907	.5185	11.556	.5370	12.241	.5556	12.963	20
21	.5000	11.167	.5185	11.796	.5370	12.463	.5556	13.167	.5741	13.907	21
22	.5185	12.074	.5370	12.722	.5556	13.407	.5741	14.130	.5926	14.889	22
23	.5370	13.019	.5556	13.685	.5741	14.389	.5926	15.130	.6111	15.907	23
24	.5556	14.000	.5741	14.685	.5926	15.407	.6111	16.167	.6296	16.963	24
25	.5741	15.019	.5926	15.722	.6111	16.463	.6296	17.241	.6481	18.056	25
26	.5926	16.074	.6111	16.796	.6296	17.556	.6481	18.352	.6667	19.185	26
27	.6111	17.167	.6296	17.907	.6481	18.685	.6667	19.500	.6852	20.352	27
28	.6296	18.296	.6481	19.056	.6667	19.852	.6852	20.685	.7037	21.556	28
29	.6481	19.463	.6667	20.241	.6852	21.056	.7037	21.907	.7222	22.796	29
30	.6667	20.667	.6852	21.463	.7037	22.296	.7222	23.167	.7407	24.074	30
31	.6852	21.907	.7037	22.722	.7222	23.574	.7407	24.463	.7593	25.389	31
32	.7037	23.185	.7222	24.019	.7407	24.889	.7593	25.796	.7778	26.741	32
33	.7222	24.500	.7407	25.352	.7593	26.241	.7778	27.167	.7963	28.130	33
34	.7407	25.852	.7593	26.722	.7778	27.630	.7963	28.574	.8148	29.556	34
35	.7593	27.241	.7778	28.130	.7963	29.056	.8148	30.019	.8333	31.019	35
36	.7778	28.667	.7963	29.574	.8148	30.519	.8333	31.500	.8519	32.519	36
37	.7963	30.130	.8148	31.056	.8333	32.019	.8519	33.019	.8704	34.056	37
38	.8148	31.630	.8333	32.574	.8519	33.556	.8704	34.574	.8889	35.630	38
39	.8333	33.167	.8519	34.130	.8704	35.130	.8889	36.167	.9074	37.241	39
40	.8519	34.741	.8704	35.722	.8889	36.741	.9074	37.796	.9259	38.889	40
41	.8704	36.352	.8889	37.352	.9074	38.389	.9259	39.463	.9444	40.574	41
42	.8889	38.000	.9074	39.019	.9259	40.074	.9444	41.167	.9630	42.296	42
43	.9074	39.685	.9259	40.722	.9444	41.796	.9630	42.907	.9815	44.056	43
44	.9259	41.407	.9444	42.463	.9630	43.556	.9815	44.685	1.0000	45.852	44
45	.9444	43.167	.9630	44.241	.9815	45.352	1.0000	46.500	1.0185	47.685	45
46	.9630	44.963	.9815	46.056	1.0000	47.185	1.0185	48.352	1.0370	49.556	46
47	.9815	46.796	1.0000	47.907	1.0185	49.056	1.0370	50.241	1.0556	51.463	47
48	1.0000	48.667	1.0185	49.796	1.0370	50.963	1.0556	52.167	1.0741	53.407	48
49	1.0185	50.574	1.0370	51.722	1.0556	52.907	1.0741	54.130	1.0926	55.389	49
50	1.0370	52.519	1.0556	53.685	1.0741	54.889	1.0926	56.130	1.1111	57.407	50
	6		7		8		9		10		

TABLE XXVII.—BASE 1—SLOPES $1\frac{1}{2}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	2.241	.2222	2.667	.2407	3.130	.2593	3.630	.2778	4.167	0
1	.2222	2.463	.2407	2.907	.2593	3.389	.2778	3.907	.2963	4.463	1
2	.2407	2.722	.2593	3.185	.2778	3.685	.2963	4.222	.3148	4.796	2
3	.2593	3.019	.2778	3.500	.2963	4.019	.3148	4.574	.3333	5.167	3
4	.2778	3.352	.2963	3.852	.3148	4.389	.3333	4.963	.3519	5.574	4
5	.2963	3.722	.3148	4.241	.3333	4.796	.3519	5.389	.3704	6.019	5
6	.3148	4.130	.3333	4.667	.3519	5.241	.3704	5.852	.3889	6.500	6
7	.3333	4.574	.3519	5.130	.3704	5.722	.3889	6.352	.4074	7.019	7
8	.3519	5.056	.3704	5.630	.3889	6.241	.4074	6.889	.4259	7.574	8
9	.3704	5.574	.3889	6.167	.4074	6.796	.4259	7.463	.4444	8.167	9
10	.3889	6.130	.4074	6.741	.4259	7.389	.4444	8.074	.4630	8.796	10
11	.4074	6.722	.4259	7.352	.4444	8.019	.4630	8.722	.4815	9.463	11
12	.4259	7.352	.4444	8.000	.4630	8.685	.4815	9.407	.5000	10.167	12
13	.4444	8.019	.4630	8.685	.4815	9.389	.5000	10.130	.5185	10.907	13
14	.4630	8.722	.4815	9.407	.5000	10.130	.5185	10.889	.5370	11.685	14
15	.4815	9.463	.5000	10.167	.5185	10.907	.5370	11.685	.5556	12.500	15
16	.5000	10.241	.5185	10.963	.5370	11.722	.5556	12.519	.5741	13.352	16
17	.5185	11.056	.5370	11.796	.5556	12.574	.5741	13.389	.5926	14.241	17
18	.5370	11.907	.5556	12.667	.5741	13.463	.5926	14.296	.6111	15.167	18
19	.5556	12.796	.5741	13.574	.5926	14.389	.6111	15.241	.6296	16.130	19
20	.5741	13.722	.5926	14.519	.6111	15.352	.6296	16.222	.6481	17.130	20
21	.5926	14.685	.6111	15.500	.6296	16.352	.6481	17.241	.6667	18.167	21
22	.6111	15.685	.6296	16.519	.6481	17.389	.6667	18.296	.6852	19.241	22
23	.6296	16.722	.6481	17.574	.6667	18.463	.6852	19.389	.7037	20.352	23
24	.6481	17.796	.6667	18.667	.6852	19.574	.7037	20.519	.7222	21.500	24
25	.6667	18.907	.6852	19.796	.7037	20.722	.7222	21.685	.7407	22.685	25
26	.6852	20.056	.7037	20.963	.7222	21.907	.7407	22.889	.7593	23.907	26
27	.7037	21.241	.7222	22.167	.7407	23.130	.7593	24.130	.7778	25.167	27
28	.7222	22.463	.7407	23.407	.7593	24.389	.7778	25.407	.7963	26.463	28
29	.7407	23.722	.7593	24.685	.7778	25.685	.7963	26.722	.8148	27.796	29
30	.7593	25.019	.7778	26.000	.7963	27.019	.8148	28.074	.8333	29.167	30
31	.7778	26.352	.7963	27.352	.8148	28.389	.8333	29.463	.8519	30.574	31
32	.7963	27.722	.8148	28.741	.8333	29.796	.8519	30.889	.8704	32.019	32
33	.8148	29.130	.8333	30.167	.8519	31.241	.8704	32.352	.8889	33.500	33
34	.8333	30.574	.8519	31.630	.8704	32.722	.8889	33.852	.9074	35.019	34
35	.8519	32.056	.8704	33.130	.8889	34.241	.9074	35.389	.9259	36.574	35
36	.8704	33.574	.8889	34.667	.9074	35.796	.9259	36.963	.9444	38.167	36
37	.8889	35.130	.9074	36.241	.9259	37.389	.9444	38.574	.9630	39.796	37
38	.9074	36.722	.9259	37.852	.9444	39.019	.9630	40.222	.9815	41.463	38
39	.9259	38.352	.9444	39.500	.9630	40.685	.9815	41.907	1.0000	43.167	39
40	.9444	40.019	.9630	41.185	.9815	42.389	1.0000	43.630	1.0185	44.907	40
41	.9630	41.792	.9815	42.907	1.0000	44.130	1.0185	45.389	1.0370	46.685	41
42	.9815	43.463	1.0000	44.667	1.0185	45.907	1.0370	47.185	1.0556	48.500	42
43	1.0000	45.241	1.0185	46.463	1.0370	47.722	1.0556	49.019	1.0741	50.352	43
44	1.0185	47.056	1.0370	48.296	1.0556	49.574	1.0741	50.889	1.0926	52.241	44
45	1.0370	48.907	1.0556	50.167	1.0741	51.463	1.0926	52.796	1.1111	54.167	45
46	1.0556	50.796	1.0741	52.074	1.0926	53.389	1.1111	54.741	1.1296	56.130	46
47	1.0741	52.722	1.0926	54.019	1.1111	55.352	1.1296	56.722	1.1481	58.130	47
48	1.0926	54.685	1.1111	56.000	1.1296	57.352	1.1481	58.741	1.1667	60.167	48
49	1.1111	56.685	1.1296	58.019	1.1481	59.389	1.1667	60.796	1.1852	62.241	49
50	1.1296	58.722	1.1481	60.074	1.1667	61.463	1.1852	62.889	1.2047	64.352	50
	11		12		13		14		15		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	4.741	.3148	5.352	.3333	6.000	.3519	6.685	.3704	7.407	0
1	.3148	5.056	.3333	5.685	.3519	6.352	.3704	7.056	.3889	7.796	1
2	.3333	5.407	.3519	6.056	.3704	6.741	.3889	7.463	.4074	8.222	2
3	.3519	5.796	.3704	6.463	.3889	7.167	.4074	7.907	.4259	8.685	3
4	.3704	6.222	.3889	6.907	.4074	7.630	.4259	8.389	.4444	9.185	4
5	.3889	6.685	.4074	7.389	.4259	8.130	.4444	8.907	.4630	9.722	5
6	.4074	7.185	.4259	7.907	.4444	8.667	.4630	9.463	.4815	10.296	6
7	.4259	7.722	.4444	8.463	.4630	9.241	.4815	10.056	.5000	10.907	7
8	.4444	8.296	.4630	9.056	.4815	9.852	.5000	10.685	.5185	11.556	8
9	.4630	8.907	.4815	9.685	.5000	10.500	.5185	11.352	.5370	12.241	9
10	.4815	9.556	.5000	10.352	.5185	11.185	.5370	12.056	.5556	12.963	10
11	.5000	10.241	.5185	11.056	.5370	11.907	.5556	12.796	.5741	13.722	11
12	.5185	10.963	.5370	11.796	.5556	12.667	.5741	13.574	.5926	14.519	12
13	.5370	11.722	.5556	12.574	.5741	13.463	.5926	14.389	.6111	15.352	13
14	.5556	12.519	.5741	13.389	.5926	14.296	.6111	15.241	.6296	16.222	14
15	.5741	13.352	.5926	14.241	.6111	15.167	.6296	16.130	.6481	17.130	15
16	.5926	14.222	.6111	15.130	.6296	16.074	.6481	17.056	.6667	18.074	16
17	.6111	15.130	.6296	16.056	.6481	17.019	.6667	18.019	.6852	19.056	17
18	.6296	16.074	.6481	17.019	.6667	18.000	.6852	19.019	.7037	20.074	18
19	.6481	17.056	.6667	18.019	.6852	19.019	.7037	20.056	.7222	21.130	19
20	.6667	18.074	.6852	19.056	.7037	20.074	.7222	21.130	.7407	22.222	20
21	.6852	19.130	.7037	20.130	.7222	21.167	.7407	22.241	.7593	23.352	21
22	.7037	20.222	.7222	21.241	.7407	22.296	.7593	23.389	.7778	24.519	22
23	.7222	21.352	.7407	22.389	.7593	23.463	.7778	24.574	.7963	25.722	23
24	.7407	22.519	.7593	23.574	.7778	24.667	.7963	25.796	.8148	26.963	24
25	.7593	23.722	.7778	24.796	.7963	25.907	.8148	27.056	.8333	28.241	25
26	.7778	24.963	.7963	26.056	.8148	27.185	.8333	28.352	.8519	29.556	26
27	.7963	26.241	.8148	27.352	.8333	28.500	.8519	29.685	.8704	30.907	27
28	.8148	27.556	.8333	28.685	.8519	29.852	.8704	31.056	.8889	32.296	28
29	.8333	28.907	.8519	30.056	.8704	31.241	.8889	32.463	.9074	33.722	29
30	.8519	30.296	.8704	31.463	.8889	32.667	.9074	33.907	.9259	35.185	30
31	.8704	31.722	.8889	32.907	.9074	34.130	.9259	35.389	.9444	36.685	31
32	.8889	33.185	.9074	34.389	.9259	35.630	.9444	36.907	.9630	38.222	32
33	.9074	34.685	.9259	35.907	.9444	37.167	.9630	38.463	.9815	39.796	33
34	.9259	36.222	.9444	37.463	.9630	38.741	.9815	40.056	1.0000	41.407	34
35	.9444	37.796	.9630	39.056	.9815	40.352	1.0000	41.685	1.0185	43.056	35
36	.9630	39.407	.9815	40.685	1.0000	42.000	1.0185	43.352	1.0370	44.741	36
37	.9815	41.056	1.0000	42.352	1.0185	43.685	1.0370	45.056	1.0556	46.463	37
38	1.0000	42.741	1.0185	44.056	1.0370	45.407	1.0556	46.796	1.0741	48.222	38
39	1.0185	44.463	1.0370	45.796	1.0556	47.167	1.0741	48.574	1.0926	50.019	39
40	1.0370	46.222	1.0556	47.574	1.0741	48.963	1.0926	50.389	1.1111	51.852	40
41	1.0556	48.019	1.0741	49.389	1.0926	50.796	1.1111	52.241	1.1296	53.722	41
42	1.0741	49.852	1.0926	51.241	1.1111	52.667	1.1296	54.130	1.1481	55.630	42
43	1.0926	51.722	1.1111	53.130	1.1296	54.574	1.1481	56.056	1.1667	57.574	43
44	1.1111	53.630	1.1296	55.056	1.1481	56.519	1.1667	58.019	1.1852	59.556	44
45	1.1296	55.574	1.1481	57.019	1.1667	58.500	1.1852	60.019	1.2047	61.574	45
46	1.1481	57.556	1.1667	59.019	1.1852	60.519	1.2047	62.056	1.2222	63.630	46
47	1.1667	59.574	1.1852	61.056	1.2047	62.574	1.2222	64.130	1.2407	65.722	47
48	1.1852	61.630	1.2047	63.130	1.2222	64.667	1.2407	66.241	1.2593	67.852	48
49	1.2047	63.722	1.2222	65.241	1.2407	66.796	1.2593	68.389	1.2778	70.019	49
50	1.2222	65.852	1.2407	67.389	1.2593	68.963	1.2778	70.574	1.2963	72.222	50
	16		17		18		19		20		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	8.167	.4074	8.963	.4259	9.796	.4444	10.667	.4630	11.574	0
1	.4074	8.574	.4259	9.389	.4444	10.241	.4630	11.130	.4815	12.056	1
2	.4259	9.019	.4444	9.852	.4630	10.722	.4815	11.630	.5000	12.574	2
3	.4444	9.500	.4630	10.352	.4815	11.241	.5000	12.167	.5185	13.130	3
4	.4630	10.019	.4815	10.889	.5000	11.796	.5185	12.741	.5370	13.722	4
5	.4815	10.574	.5000	11.463	.5185	12.389	.5370	13.352	.5556	14.352	5
6	.5000	11.167	.5185	12.074	.5370	13.019	.5556	14.000	.5741	15.019	6
7	.5185	11.796	.5370	12.722	.5556	13.685	.5741	14.685	.5926	15.722	7
8	.5370	12.463	.5556	13.407	.5741	14.389	.5926	15.407	.6111	16.463	8
9	.5556	13.167	.5741	14.130	.5926	15.130	.6111	16.167	.6296	17.241	9
10	.5741	13.907	.5926	14.889	.6111	15.907	.6296	16.963	.6481	18.056	10
11	.5926	14.685	.6111	15.685	.6296	16.722	.6481	17.796	.6667	18.907	11
12	.6111	15.500	.6296	16.519	.6481	17.574	.6667	18.667	.6852	19.796	12
13	.6296	16.352	.6481	17.389	.6667	18.463	.6852	19.574	.7037	20.722	13
14	.6481	17.241	.6667	18.296	.6852	19.389	.7037	20.519	.7222	21.685	14
15	.6667	18.167	.6852	19.241	.7037	20.352	.7222	21.500	.7407	22.685	15
16	.6852	19.130	.7037	20.222	.7222	21.352	.7407	22.519	.7593	23.722	16
17	.7037	20.130	.7222	21.241	.7407	22.389	.7593	23.574	.7778	24.796	17
18	.7222	21.167	.7407	22.296	.7593	23.463	.7778	24.667	.7963	25.907	18
19	.7407	22.241	.7593	23.389	.7778	24.574	.7963	25.796	.8148	27.056	19
20	.7593	23.352	.7778	24.519	.7963	25.722	.8148	26.963	.8333	28.241	20
21	.7778	24.500	.7963	25.685	.8148	26.907	.8333	28.167	.8519	29.463	21
22	.7963	25.685	.8148	26.889	.8333	28.130	.8519	29.407	.8704	30.722	22
23	.8148	26.907	.8333	28.130	.8519	29.389	.8704	30.685	.8889	32.019	23
24	.8333	28.167	.8519	29.407	.8704	30.685	.8889	32.000	.9074	33.352	24
25	.8519	29.463	.8704	30.722	.8889	32.019	.9074	33.352	.9259	34.722	25
26	.8704	30.796	.8889	32.074	.9074	33.389	.9259	34.741	.9444	36.130	26
27	.8889	32.167	.9074	33.463	.9259	34.796	.9444	36.167	.9630	37.574	27
28	.9074	33.574	.9259	34.889	.9444	36.241	.9630	37.630	.9815	39.056	28
29	.9259	35.019	.9444	36.352	.9630	37.722	.9815	39.130	1.0000	40.574	29
30	.9444	36.500	.9630	37.852	.9815	39.241	1.0000	40.667	1.0185	42.130	30
31	.9630	38.019	.9815	39.389	1.0000	40.796	1.0185	42.241	1.0370	43.722	31
32	.9815	39.574	1.0000	40.963	1.0185	42.389	1.0370	43.852	1.0556	45.352	32
33	1.0000	41.167	1.0185	42.574	1.0370	44.019	1.0556	45.500	1.0741	47.019	33
34	1.0185	42.796	1.0370	44.222	1.0556	45.685	1.0741	47.185	1.0926	48.722	34
35	1.0370	44.463	1.0556	45.907	1.0741	47.389	1.0926	48.907	1.1111	50.463	35
36	1.0556	46.167	1.0741	47.630	1.0926	49.130	1.1111	50.667	1.1296	52.241	36
37	1.0741	47.907	1.0926	49.389	1.1111	50.907	1.1296	52.463	1.1481	54.056	37
38	1.0926	49.685	1.1111	51.185	1.1296	52.722	1.1481	54.296	1.1667	55.907	38
39	1.1111	51.500	1.1296	53.019	1.1481	54.574	1.1667	56.167	1.1852	57.796	39
40	1.1296	53.352	1.1481	54.889	1.1667	56.463	1.1852	58.074	1.2047	59.722	40
41	1.1481	55.241	1.1667	56.796	1.1852	58.389	1.2047	60.019	1.2222	61.685	41
42	1.1667	57.167	1.1852	58.741	1.2047	60.352	1.2222	62.000	1.2407	63.685	42
43	1.1852	59.130	1.2047	60.722	1.2222	62.352	1.2407	64.019	1.2593	65.722	43
44	1.2047	61.130	1.2222	62.741	1.2407	64.389	1.2593	66.074	1.2778	67.796	44
45	1.2222	63.167	1.2407	64.796	1.2593	66.463	1.2778	68.167	1.2963	69.907	45
46	1.2407	65.241	1.2593	66.889	1.2778	68.574	1.2963	70.296	1.3148	72.056	46
47	1.2593	67.352	1.2778	69.019	1.2963	70.722	1.3148	72.463	1.3333	74.241	47
48	1.2778	69.500	1.2963	71.185	1.3148	72.907	1.3333	74.667	1.3519	76.463	48
49	1.2963	71.685	1.3148	73.389	1.3333	75.130	1.3519	76.907	1.3704	78.722	49
50	1.3148	73.907	1.3333	75.630	1.3519	77.389	1.3704	79.185	1.3889	81.019	50
	21		22		23		24		25		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	12.519	.5000	13.500	.5185	14.519	.5370	15.574	.5556	16.667	0
1	.5000	13.019	.5185	14.019	.5370	15.056	.5556	16.130	.5741	17.241	1
2	.5185	13.556	.5370	14.574	.5556	15.630	.5741	16.722	.5926	17.852	2
3	.5370	14.130	.5556	15.167	.5741	16.241	.5926	17.352	.6111	18.500	3
4	.5556	14.741	.5741	15.796	.5926	16.889	.6111	18.019	.6296	19.185	4
5	.5741	15.389	.5926	16.463	.6111	17.574	.6296	18.722	.6481	19.907	5
6	.5926	16.074	.6111	17.167	.6296	18.296	.6481	19.463	.6667	20.667	6
7	.6111	16.796	.6296	17.907	.6481	19.056	.6667	20.241	.6852	21.463	7
8	.6296	17.556	.6481	18.685	.6667	19.852	.6852	21.056	.7037	22.296	8
9	.6481	18.352	.6667	19.500	.6852	20.685	.7037	21.907	.7222	23.167	9
10	.6667	19.185	.6852	20.352	.7037	21.556	.7222	22.796	.7407	24.074	10
11	.6852	20.056	.7037	21.241	.7222	22.463	.7407	23.722	.7593	25.019	11
12	.7037	20.963	.7222	22.167	.7407	23.407	.7593	24.685	.7778	26.000	12
13	.7222	21.907	.7407	23.130	.7593	24.389	.7778	25.685	.7963	27.019	13
14	.7407	22.889	.7593	24.130	.7778	25.407	.7963	26.722	.8148	28.074	14
15	.7593	23.907	.7778	25.167	.7963	26.463	.8148	27.796	.8333	29.167	15
16	.7778	24.963	.7963	26.241	.8148	27.556	.8333	28.907	.8519	30.296	16
17	.7963	26.056	.8148	27.352	.8333	28.685	.8519	30.056	.8704	31.463	17
18	.8148	27.185	.8333	28.500	.8519	29.852	.8704	31.241	.8889	32.667	18
19	.8333	28.352	.8519	29.685	.8704	31.056	.8889	32.463	.9074	33.907	19
20	.8519	29.556	.8704	30.907	.8889	32.296	.9074	33.722	.9259	35.185	20
21	.8704	30.796	.8889	32.167	.9074	33.574	.9259	35.019	.9444	36.500	21
22	.8889	32.074	.9074	33.463	.9259	34.889	.9444	36.352	.9630	37.852	22
23	.9074	33.389	.9259	34.796	.9444	36.241	.9630	37.722	.9815	39.241	23
24	.9259	34.741	.9444	36.167	.9630	37.630	.9815	39.130	1.0000	40.667	24
25	.9444	36.130	.9630	37.574	.9815	39.056	1.0000	40.574	1.0185	42.130	25
26	.9630	37.556	.9815	39.019	1.0000	40.519	1.0185	42.056	1.0370	43.630	26
27	.9815	39.019	1.0000	40.500	1.0185	42.019	1.0370	43.574	1.0556	45.167	27
28	1.0000	40.519	1.0185	42.019	1.0370	43.556	1.0556	45.130	1.0741	46.741	28
29	1.0185	42.056	1.0370	43.574	1.0556	45.130	1.0741	46.722	1.0926	48.352	29
30	1.0370	43.630	1.0556	45.167	1.0741	46.741	1.0926	48.352	1.1111	50.000	30
31	1.0556	45.241	1.0741	46.796	1.0926	48.389	1.1111	50.019	1.1296	51.685	31
32	1.0741	46.889	1.0926	48.463	1.1111	50.074	1.1296	51.722	1.1481	53.407	32
33	1.0926	48.574	1.1111	50.167	1.1296	51.796	1.1481	53.463	1.1667	55.167	33
34	1.1111	50.296	1.1296	51.907	1.1481	53.556	1.1667	55.241	1.1852	56.963	34
35	1.1296	52.056	1.1481	53.685	1.1667	55.352	1.1852	57.056	1.2047	58.796	35
36	1.1481	53.852	1.1667	55.500	1.1852	57.185	1.2047	58.907	1.2222	60.667	36
37	1.1667	55.685	1.1852	57.352	1.2047	59.056	1.2222	60.796	1.2407	62.574	37
38	1.1852	57.556	1.2047	59.241	1.2222	60.963	1.2407	62.722	1.2593	64.519	38
39	1.2047	59.463	1.2222	61.167	1.2407	62.907	1.2593	64.685	1.2778	66.500	39
40	1.2222	61.407	1.2407	63.130	1.2593	64.889	1.2778	66.685	1.2963	68.519	40
41	1.2407	63.389	1.2593	65.130	1.2778	66.907	1.2963	68.722	1.3148	70.574	41
42	1.2593	65.407	1.2778	67.167	1.2963	68.963	1.3148	70.796	1.3333	72.667	42
43	1.2778	67.463	1.2963	69.241	1.3148	71.056	1.3333	72.907	1.3519	74.796	43
44	1.2963	69.556	1.3148	71.352	1.3333	73.185	1.3519	75.056	1.3704	76.963	44
45	1.3148	71.685	1.3333	73.500	1.3519	75.352	1.3704	77.241	1.3889	79.167	45
46	1.3333	73.852	1.3519	75.685	1.3704	77.556	1.3889	79.463	1.4074	81.407	46
47	1.3519	76.056	1.3704	77.907	1.3889	79.796	1.4074	81.722	1.4259	83.685	47
48	1.3704	78.296	1.3889	80.167	1.4074	82.074	1.4259	84.019	1.4444	86.000	48
49	1.3889	80.574	1.4074	82.463	1.4259	84.389	1.4444	86.352	1.4630	88.352	59
50	1.4074	82.889	1.4259	84.796	1.4444	86.741	1.4630	88.722	1.4815	90.741	50
	26		27		28		29		30		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	17.796	.5926	18.963	.6111	20.167	.6296	21.407	.6481	22.685	0
1	.5926	18.389	.6111	19.574	.6296	20.796	.6481	22.056	.6667	23.352	1
2	.6111	19.019	.6296	20.222	.6481	21.463	.6667	22.741	.6852	24.056	2
3	.6296	19.685	.6481	20.907	.6667	22.167	.6852	23.463	.7037	24.796	3
4	.6481	20.389	.6667	21.630	.6852	22.907	.7037	24.222	.7222	25.574	4
5	.6667	21.130	.6852	22.389	.7037	23.685	.7222	25.019	.7407	26.389	5
6	.6852	21.907	.7037	23.185	.7222	24.500	.7407	25.852	.7593	27.241	6
7	.7037	22.722	.7222	24.019	.7407	25.352	.7593	26.722	.7778	28.130	7
8	.7222	23.574	.7407	24.889	.7593	26.241	.7778	27.630	.7963	29.056	8
9	.7407	24.463	.7593	25.796	.7778	27.167	.7963	28.574	.8148	30.019	9
10	.7593	25.389	.7778	26.741	.7963	28.130	.8148	29.556	.8333	31.019	10
11	.7778	26.352	.7963	27.722	.8148	29.130	.8333	30.574	.8519	32.056	11
12	.7963	27.352	.8148	28.741	.8333	30.167	.8519	31.630	.8704	33.130	12
13	.8148	28.389	.8333	29.796	.8519	31.241	.8704	32.722	.8889	34.241	13
14	.8333	29.463	.8519	30.889	.8704	32.352	.8889	33.852	.9074	35.389	14
15	.8519	30.574	.8704	32.019	.8889	33.500	.9074	35.019	.9259	36.574	15
16	.8704	31.722	.8889	33.185	.9074	34.685	.9259	36.222	.9444	37.796	16
17	.8889	32.907	.9074	34.389	.9259	35.907	.9444	37.463	.9630	39.056	17
18	.9074	34.130	.9259	35.630	.9444	37.167	.9630	38.741	.9815	40.352	18
19	.9259	35.389	.9444	36.907	.9630	38.463	.9815	40.056	1.0000	41.685	19
20	.9444	36.685	.9630	38.222	.9815	39.796	1.0000	41.407	1.0185	43.056	20
21	.9630	38.019	.9815	39.574	1.0000	41.167	1.0185	42.796	1.0370	44.463	21
22	.9815	39.389	1.0000	40.963	1.0185	42.574	1.0370	44.222	1.0556	45.907	22
23	1.0000	40.796	1.0185	42.389	1.0370	44.019	1.0556	45.685	1.0741	47.389	23
24	1.0185	42.241	1.0370	43.852	1.0556	45.500	1.0741	47.185	1.0926	48.907	24
25	1.0370	43.722	1.0556	45.352	1.0741	47.019	1.0926	48.722	1.1111	50.463	25
26	1.0556	45.241	1.0741	46.889	1.0926	48.574	1.1111	50.296	1.1296	52.056	26
27	1.0741	46.796	1.0926	48.463	1.1111	50.167	1.1296	51.907	1.1481	53.685	27
28	1.0926	48.389	1.1111	50.074	1.1296	51.796	1.1481	53.556	1.1667	55.352	28
29	1.1111	50.019	1.1296	51.722	1.1481	53.463	1.1667	55.241	1.1852	57.056	29
30	1.1296	51.685	1.1481	53.407	1.1667	55.167	1.1852	56.963	1.2047	58.796	30
31	1.1481	53.389	1.1667	55.130	1.1852	56.907	1.2047	58.722	1.2222	60.574	31
32	1.1667	55.130	1.1852	56.889	1.2047	58.685	1.2222	60.519	1.2407	62.389	32
33	1.1852	56.907	1.2047	58.685	1.2222	60.500	1.2407	62.352	1.2593	64.241	33
34	1.2047	58.722	1.2222	60.519	1.2407	62.352	1.2593	64.222	1.2778	66.130	34
35	1.2222	60.574	1.2407	62.389	1.2593	64.241	1.2778	66.130	1.2963	68.056	35
36	1.2407	62.463	1.2593	64.296	1.2778	66.167	1.2963	68.074	1.3148	70.019	36
37	1.2593	64.389	1.2778	66.241	1.2963	68.130	1.3148	70.056	1.3333	72.019	37
38	1.2778	66.352	1.2963	68.222	1.3148	70.130	1.3333	72.074	1.3519	74.056	38
39	1.2963	68.352	1.3148	70.241	1.3333	72.167	1.3519	74.130	1.3704	76.130	39
40	1.3148	70.389	1.3333	72.296	1.3519	74.241	1.3704	76.222	1.3889	78.241	40
41	1.3333	72.463	1.3519	74.389	1.3704	76.352	1.3889	78.352	1.4074	80.389	41
42	1.3519	74.574	1.3704	76.519	1.3889	78.500	1.4074	80.519	1.4259	82.574	42
43	1.3704	76.722	1.3889	78.685	1.4074	80.685	1.4259	82.722	1.4444	84.796	43
44	1.3889	78.907	1.4074	80.889	1.4259	82.907	1.4444	84.963	1.4630	87.056	44
45	1.4074	81.130	1.4259	83.130	1.4444	85.167	1.4630	87.241	1.4815	89.352	45
46	1.4259	83.389	1.4444	85.407	1.4630	87.463	1.4815	89.556	1.5000	91.685	46
47	1.4444	85.685	1.4630	87.722	1.4815	89.796	1.5000	91.907	1.5185	94.056	47
48	1.4630	88.019	1.4815	90.074	1.5000	92.167	1.5185	94.296	1.5370	96.463	48
49	1.4815	90.389	1.5000	92.463	1.5185	94.574	1.5370	96.722	1.5556	98.907	49
50	1.5000	92.796	1.5185	94.889	1.5370	97.019	1.5556	99.185	1.5741	101.389	50
	31		32		33		34		35		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	24.000	.6852	25.352	.7037	26.741	.7222	28.167	.7407	29.630	0
1	.6852	24.685	.7037	26.056	.7222	27.463	.7407	28.907	.7593	30.389	1
2	.7037	25.407	.7222	26.796	.7407	28.222	.7593	29.685	.7778	31.185	2
3	.7222	26.167	.7407	27.574	.7593	29.019	.7778	30.500	.7963	32.019	3
4	.7407	26.963	.7593	28.389	.7778	29.852	.7963	31.352	.8148	32.889	4
5	.7593	27.796	.7778	29.241	.7963	30.722	.8148	32.241	.8333	33.796	5
6	.7778	28.667	.7963	30.130	.8148	31.630	.8333	33.167	.8519	34.741	6
7	.7963	29.574	.8148	31.056	.8333	32.574	.8519	34.130	.8704	35.722	7
8	.8148	30.519	.8333	32.019	.8519	33.556	.8704	35.130	.8889	36.741	8
9	.8333	31.500	.8519	33.019	.8704	34.574	.8889	36.167	.9074	37.796	9
10	.8519	32.519	.8704	34.056	.8889	35.630	.9074	37.241	.9259	38.889	10
11	.8704	33.574	.8889	35.150	.9074	36.722	.9259	38.352	.9444	40.019	11
12	.8889	34.667	.9074	36.241	.9259	37.852	.9444	39.500	.9630	41.185	12
13	.9074	35.796	.9259	37.389	.9444	39.019	.9630	40.685	.9815	42.389	13
14	.9259	36.963	.9444	38.574	.9630	40.222	.9815	41.907	1.0000	43.630	14
15	.9444	38.167	.9630	39.796	.9815	41.463	1.0000	43.167	1.0185	44.907	15
16	.9630	39.407	.9815	41.056	1.0000	42.741	1.0185	44.463	1.0370	46.222	16
17	.9815	40.685	1.0000	42.352	1.0185	44.056	1.0370	45.796	1.0556	47.574	17
18	1.0000	42.000	1.0185	43.685	1.0370	45.407	1.0556	47.167	1.0741	48.963	18
19	1.0185	43.352	1.0370	45.056	1.0556	46.796	1.0741	48.574	1.0926	50.389	19
20	1.0370	44.741	1.0556	46.463	1.0741	48.222	1.0926	50.019	1.1111	51.852	20
21	1.0556	46.167	1.0741	47.907	1.0926	49.685	1.1111	51.500	1.1296	53.352	21
22	1.0741	47.630	1.0926	49.389	1.1111	51.185	1.1296	53.019	1.1481	54.889	22
23	1.0926	49.130	1.1111	50.907	1.1296	52.722	1.1481	54.574	1.1667	56.463	23
24	1.1111	50.667	1.1296	52.463	1.1481	54.296	1.1667	56.167	1.1852	58.074	24
25	1.1296	52.241	1.1481	54.056	1.1667	55.907	1.1852	57.796	1.2047	59.722	25
26	1.1481	53.852	1.1667	55.685	1.1852	57.556	1.2047	59.463	1.2222	61.407	26
27	1.1667	55.500	1.1852	57.352	1.2047	59.241	1.2222	61.167	1.2407	63.130	27
28	1.1852	57.185	1.2047	59.056	1.2222	60.963	1.2407	62.907	1.2593	64.889	28
29	1.2047	58.907	1.2222	60.796	1.2407	62.722	1.2593	64.685	1.2778	66.685	29
30	1.2222	60.667	1.2407	62.574	1.2593	64.519	1.2778	66.500	1.2963	68.519	30
31	1.2407	62.463	1.2593	64.389	1.2778	66.352	1.2963	68.352	1.3148	70.389	31
32	1.2593	64.296	1.2778	66.241	1.2963	68.222	1.3148	70.241	1.3333	72.296	32
33	1.2778	66.167	1.2963	68.130	1.3148	70.130	1.3333	72.167	1.3519	74.241	33
34	1.2963	68.074	1.3148	70.056	1.3333	72.074	1.3519	74.130	1.3704	76.222	34
35	1.3148	70.019	1.3333	72.019	1.3519	74.056	1.3704	76.130	1.3889	78.241	35
36	1.3333	72.000	1.3519	74.019	1.3704	76.074	1.3889	78.167	1.4074	80.296	36
37	1.3519	74.019	1.3704	76.056	1.3889	78.130	1.4074	80.241	1.4259	82.389	37
38	1.3704	76.074	1.3889	78.130	1.4074	80.222	1.4259	82.352	1.4444	84.519	38
39	1.3889	78.167	1.4074	80.241	1.4259	82.352	1.4444	84.500	1.4630	86.685	39
40	1.4074	80.296	1.4259	82.389	1.4444	84.519	1.4630	86.685	1.4815	88.889	40
41	1.4259	82.463	1.4444	84.574	1.4630	86.722	1.4815	88.907	1.5000	91.130	41
42	1.4444	84.667	1.4630	86.796	1.4815	88.963	1.5000	91.167	1.5185	93.407	42
43	1.4630	86.907	1.4815	89.056	1.5000	91.241	1.5185	93.463	1.5370	95.722	43
44	1.4815	89.185	1.5000	91.352	1.5185	93.556	1.5370	95.796	1.5556	98.074	44
45	1.5000	91.500	1.5185	93.685	1.5370	95.907	1.5556	98.167	1.5741	100.463	45
46	1.5185	93.852	1.5370	96.056	1.5556	98.296	1.5741	100.574	1.5926	102.889	46
47	1.5370	96.241	1.5556	98.463	1.5741	100.722	1.5926	103.019	1.6111	105.352	47
48	1.5556	98.667	1.5741	100.907	1.5926	103.185	1.6111	105.500	1.6296	107.852	48
49	1.5741	101.130	1.5926	103.389	1.6111	105.685	1.6296	108.019	1.6481	110.389	49
50	1.5926	103.630	1.6111	105.907	1.6296	108.222	1.6481	110.574	1.6667	112.963	50
	36		37		38		39		40		

TABLE XXVII.—BASE I—SLOPES 1½ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	31.130	.7778	32.667	.7963	34.241	.8148	35.852	.8333	37.500	0
1	.7778	31.907	.7963	33.463	.8148	35.056	.8333	36.685	.8519	38.352	1
2	.7963	32.722	.8148	34.296	.8333	35.907	.8519	37.556	.8704	39.241	2
3	.8148	33.574	.8333	35.167	.8519	36.796	.8704	38.463	.8889	40.167	3
4	.8333	34.463	.8519	36.074	.8704	37.722	.8889	39.407	.9074	41.130	4
5	.8519	35.389	.8704	37.019	.8889	38.685	.9074	40.389	.9259	42.130	5
6	.8704	36.352	.8889	38.000	.9074	39.685	.9259	41.407	.9444	43.167	6
7	.8889	37.352	.9074	39.019	.9259	40.722	.9444	42.463	.9630	44.241	7
8	.9074	38.389	.9259	40.074	.9444	41.796	.9630	43.556	.9815	45.352	8
9	.9259	39.463	.9444	41.167	.9630	42.907	.9815	44.685	1.0000	46.500	9
10	.9444	40.574	.9630	42.296	.9815	44.056	1.0000	45.852	1.0185	47.685	10
11	.9630	41.792	.9815	43.463	1.0000	45.241	1.0185	47.056	1.0370	48.907	11
12	.9815	42.907	1.0000	44.667	1.0185	46.463	1.0370	48.296	1.0556	50.167	12
13	1.0000	44.130	1.0185	45.907	1.0370	47.722	1.0556	49.574	1.0741	51.463	13
14	1.0185	45.389	1.0370	47.185	1.0556	49.019	1.0741	50.889	1.0926	52.796	14
15	1.0370	46.685	1.0556	48.500	1.0741	50.352	1.0926	52.241	1.1111	54.167	15
16	1.0556	48.019	1.0741	49.852	1.0926	51.722	1.1111	53.630	1.1296	55.574	16
17	1.0741	49.389	1.0926	51.241	1.1111	53.130	1.1296	55.056	1.1481	57.019	17
18	1.0926	50.796	1.1111	52.667	1.1296	54.574	1.1481	56.519	1.1667	58.500	18
19	1.1111	52.241	1.1296	54.130	1.1481	56.056	1.1667	58.019	1.1852	60.019	19
20	1.1296	53.722	1.1481	55.630	1.1667	57.574	1.1852	59.556	1.2047	61.574	20
21	1.1481	55.241	1.1667	57.167	1.1852	59.130	1.2047	61.130	1.2222	63.167	21
22	1.1667	56.796	1.1852	58.741	1.2047	60.722	1.2222	62.741	1.2407	64.796	22
23	1.1852	58.389	1.2047	60.352	1.2222	62.352	1.2407	64.389	1.2593	66.463	23
24	1.2047	60.019	1.2222	62.000	1.2407	64.019	1.2593	66.074	1.2778	68.167	24
25	1.2222	61.685	1.2407	63.685	1.2593	65.722	1.2778	67.796	1.2965	69.907	25
26	1.2407	63.389	1.2593	65.407	1.2778	67.463	1.2963	69.556	1.3148	71.685	26
27	1.2593	65.130	1.2778	67.167	1.2963	69.241	1.3148	71.352	1.3333	73.500	27
28	1.2778	66.907	1.2963	68.963	1.3148	71.056	1.3333	73.185	1.3519	75.352	28
29	1.2963	68.722	1.3148	70.796	1.3333	72.907	1.3519	75.056	1.3704	77.241	29
30	1.3148	70.574	1.3333	72.667	1.3519	74.796	1.3704	76.963	1.3889	79.167	30
31	1.3333	72.463	1.3519	74.574	1.3704	76.722	1.3889	78.907	1.4074	81.130	31
32	1.3519	74.389	1.3704	76.519	1.3889	78.685	1.4074	80.889	1.4259	83.130	32
33	1.3704	76.352	1.3889	78.500	1.4074	80.685	1.4259	82.907	1.4444	85.167	33
34	1.3889	78.352	1.4074	80.519	1.4259	82.722	1.4444	84.963	1.4630	87.241	34
35	1.4074	80.389	1.4259	82.574	1.4444	84.796	1.4630	87.056	1.4815	89.352	35
36	1.4259	82.463	1.4444	84.667	1.4630	86.907	1.4815	89.185	1.5000	91.500	36
37	1.4444	84.574	1.4630	86.796	1.4815	89.056	1.5000	91.352	1.5185	93.685	37
38	1.4630	86.722	1.4815	88.963	1.5000	91.241	1.5185	93.556	1.5370	95.907	38
39	1.4815	88.907	1.5000	91.167	1.5185	93.463	1.5370	95.796	1.5556	98.167	39
40	1.5000	91.130	1.5185	93.407	1.5370	95.722	1.5556	98.074	1.5741	100.463	40
41	1.5185	93.389	1.5370	95.685	1.5556	98.019	1.5741	100.389	1.5926	102.796	41
42	1.5370	95.685	1.5556	98.000	1.5741	100.352	1.5926	102.741	1.6111	105.167	42
43	1.5556	98.019	1.5741	100.352	1.5926	102.722	1.6111	105.130	1.6296	107.574	43
44	1.5741	100.389	1.5926	102.741	1.6111	105.130	1.6296	107.556	1.6481	110.019	44
45	1.5926	102.796	1.6111	105.167	1.6296	107.574	1.6481	110.019	1.6667	112.500	45
46	1.6111	105.241	1.6296	107.630	1.6481	110.056	1.6667	112.519	1.6852	115.019	46
47	1.6296	107.722	1.6481	110.130	1.6667	112.574	1.6852	115.056	1.7037	117.574	47
48	1.6481	110.241	1.6667	112.667	1.6852	115.130	1.7037	117.630	1.7222	120.167	48
49	1.6667	112.796	1.6852	115.241	1.7037	117.722	1.7222	120.241	1.7407	122.796	49
50	1.6852	115.389	1.7037	117.852	1.7222	120.352	1.7407	122.889	1.7593	125.463	50
	41		42		43		44		45		

TABLE XXVII.—BASE 1—SLOPES 1½ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	39.185	.8704	40.907	.8889	42.667	.9074	44.463	.9259	46.296	0
1	.8704	40.056	.8889	41.796	.9074	43.574	.9259	45.389	.9444	47.241	1
2	.8889	40.963	.9074	42.722	.9259	44.519	.9444	46.352	.9630	48.222	2
3	.9074	41.907	.9259	43.685	.9444	45.500	.9630	47.352	.9815	49.241	3
4	.9259	42.889	.9444	44.685	.9630	46.519	.9815	48.389	1.0000	50.296	4
5	.9444	43.907	.9630	45.722	.9815	47.574	1.0000	49.463	1.0185	51.389	5
6	.9630	44.963	.9815	46.796	1.0000	48.667	1.0185	50.574	1.0370	52.519	6
7	.9815	46.056	1.0000	47.907	1.0185	49.796	1.0370	51.722	1.0556	53.685	7
8	1.0000	47.185	1.0185	49.056	1.0370	50.963	1.0556	52.907	1.0741	54.889	8
9	1.0185	48.352	1.0370	50.241	1.0556	52.167	1.0741	54.130	1.0926	56.130	9
10	1.0370	49.556	1.0556	51.463	1.0741	53.407	1.0926	55.389	1.1111	57.407	10
11	1.0556	50.796	1.0741	52.722	1.0926	54.685	1.1111	56.685	1.1296	58.722	11
12	1.0741	52.074	1.0926	54.019	1.1111	56.000	1.1296	58.019	1.1481	60.074	12
13	1.0926	53.389	1.1111	55.352	1.1296	57.352	1.1481	59.389	1.1667	61.463	13
14	1.1111	54.741	1.1296	56.722	1.1481	58.741	1.1667	60.796	1.1852	62.889	14
15	1.1296	56.130	1.1481	58.130	1.1667	60.167	1.1852	62.241	1.2047	64.352	15
16	1.1481	57.556	1.1667	59.574	1.1852	61.630	1.2047	63.722	1.2222	65.852	16
17	1.1667	59.019	1.1852	61.056	1.2047	63.130	1.2222	65.241	1.2407	67.389	17
18	1.1852	60.519	1.2047	62.574	1.2222	64.667	1.2407	66.796	1.2593	68.963	18
19	1.2047	62.056	1.2222	64.130	1.2407	66.241	1.2593	68.389	1.2778	70.574	19
20	1.2222	63.630	1.2407	65.722	1.2593	67.852	1.2778	70.019	1.2963	72.222	20
21	1.2407	65.241	1.2593	67.352	1.2778	69.500	1.2963	71.685	1.3148	73.907	21
22	1.2593	66.889	1.2778	69.019	1.2963	71.185	1.3148	73.389	1.3333	75.630	22
23	1.2778	68.574	1.2963	70.722	1.3148	72.907	1.3333	75.130	1.3519	77.389	23
24	1.2963	70.296	1.3148	72.463	1.3333	74.667	1.3519	76.907	1.3704	79.185	24
25	1.3148	72.056	1.3333	74.241	1.3519	76.463	1.3704	78.722	1.3889	81.019	25
26	1.3333	73.852	1.3519	76.056	1.3704	78.296	1.3889	80.574	1.4074	82.889	26
27	1.3519	75.685	1.3704	77.907	1.3889	80.167	1.4074	82.463	1.4259	84.796	27
28	1.3704	77.556	1.3889	79.796	1.4074	82.074	1.4259	84.389	1.4444	86.741	28
29	1.3889	79.463	1.4074	81.722	1.4259	84.019	1.4444	86.352	1.4630	88.722	29
30	1.4074	81.407	1.4259	83.685	1.4444	86.000	1.4630	88.352	1.4815	90.741	30
31	1.4259	83.389	1.4444	85.685	1.4630	88.019	1.4815	90.389	1.5000	92.796	31
32	1.4444	85.407	1.4630	87.722	1.4815	90.074	1.5000	92.463	1.5185	94.889	32
33	1.4630	87.463	1.4815	89.796	1.5000	92.167	1.5185	94.574	1.5370	97.019	33
34	1.4815	89.556	1.5000	91.907	1.5185	94.296	1.5370	96.722	1.5556	99.185	34
35	1.5000	91.685	1.5185	94.056	1.5370	96.463	1.5556	98.907	1.5741	101.389	35
36	1.5185	93.852	1.5370	96.241	1.5556	98.667	1.5741	101.130	1.5926	103.630	36
37	1.5370	96.056	1.5556	98.463	1.5741	100.907	1.5926	103.389	1.6111	105.907	37
38	1.5556	98.296	1.5741	100.722	1.5926	103.185	1.6111	105.685	1.6296	108.222	38
39	1.5741	100.574	1.5926	103.019	1.6111	105.500	1.6296	108.019	1.6481	110.574	39
40	1.5926	102.889	1.6111	105.352	1.6296	107.852	1.6481	110.389	1.6667	112.963	40
41	1.6111	105.241	1.6296	107.722	1.6481	110.241	1.6667	112.796	1.6852	115.389	41
42	1.6296	107.630	1.6481	110.130	1.6667	112.667	1.6852	115.241	1.7037	117.852	42
43	1.6481	110.056	1.6667	112.574	1.6852	115.130	1.7037	117.722	1.7222	120.352	43
44	1.6667	112.519	1.6852	115.056	1.7037	117.630	1.7222	120.241	1.7407	122.889	44
45	1.6852	115.019	1.7037	117.574	1.7222	120.167	1.7407	122.796	1.7593	125.463	45
46	1.7037	117.556	1.7222	120.130	1.7407	122.741	1.7593	125.389	1.7778	128.074	46
47	1.7222	120.130	1.7407	122.722	1.7593	125.352	1.7778	128.019	1.7963	130.722	47
48	1.7407	122.741	1.7593	125.352	1.7778	128.000	1.7963	130.685	1.8148	133.407	48
49	1.7593	125.389	1.7778	128.019	1.7963	130.685	1.8148	133.389	1.8333	136.130	49
50	1.7778	128.074	1.7963	130.722	1.8148	133.407	1.8333	136.130	1.8519	138.889	50
	46		47		48		49		50		

TABLE XXVIII.—BASE 1—SLOPES $1\frac{3}{4}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	.022	.0370	.086	.0556	.194	.0741	.346	.0926	.540	0
1	.0370	.065	.0556	.151	.0741	.281	.0926	.454	.1111	.670	1
2	.0556	.151	.0741	.259	.0926	.410	.1111	.605	.1296	.843	2
3	.0741	.281	.0926	.410	.1111	.583	.1296	.799	.1481	1.059	3
4	.0926	.454	.1111	.605	.1296	.799	.1481	1.037	.1667	1.318	4
5	.1111	.670	.1296	.843	.1481	1.059	.1667	1.318	.1852	1.620	5
6	.1296	.929	.1481	1.123	.1667	1.361	.1852	1.642	.2047	1.966	6
7	.1481	1.231	.1667	1.448	.1852	1.707	.2047	2.009	.2222	2.355	7
8	.1667	1.577	.1852	1.815	.2047	2.096	.2222	2.420	.2407	2.787	8
9	.1852	1.966	.2047	2.225	.2222	2.528	.2407	2.873	.2593	3.262	9
10	.2047	2.398	.2222	2.679	.2407	3.003	.2593	3.370	.2778	3.781	10
11	.2222	2.873	.2407	3.176	.2593	3.522	.2778	3.910	.2963	4.343	11
12	.2407	3.392	.2593	3.716	.2778	4.083	.2963	4.494	.3148	4.948	12
13	.2593	3.954	.2778	4.299	.2963	4.688	.3148	5.120	.3333	5.596	13
14	.2778	4.559	.2963	4.926	.3148	5.336	.3333	5.790	.3519	6.287	14
15	.2963	5.207	.3148	5.596	.3333	6.028	.3519	6.503	.3704	7.022	15
16	.3148	5.898	.3333	6.309	.3519	6.762	.3704	7.259	.3889	7.799	16
17	.3333	6.633	.3519	7.065	.3704	7.540	.3889	8.059	.4074	8.620	17
18	.3519	7.410	.3704	7.864	.3889	8.361	.4074	8.901	.4259	9.485	18
19	.3704	8.231	.3889	8.707	.4074	9.225	.4259	9.787	.4444	10.392	19
20	.3889	9.096	.4074	9.593	.4259	10.133	.4444	10.716	.4630	11.343	20
21	.4074	10.003	.4259	10.522	.4444	11.083	.4630	11.688	.4815	12.336	21
22	.4259	10.954	.4444	11.494	.4630	12.077	.4815	12.704	.5000	13.373	22
23	.4444	11.948	.4630	12.509	.4815	13.114	.5000	13.762	.5185	14.454	23
24	.4630	12.985	.4815	13.568	.5000	14.194	.5185	14.864	.5370	15.577	24
25	.4815	14.065	.5000	14.670	.5185	15.318	.5370	16.009	.5556	16.744	25
26	.5000	15.188	.5185	15.815	.5370	16.485	.5556	17.198	.5741	17.954	26
27	.5185	16.355	.5370	17.003	.5556	17.694	.5741	18.429	.5926	19.207	27
28	.5370	17.565	.5556	18.235	.5741	18.948	.5926	19.704	.6111	20.503	28
29	.5556	18.818	.5741	19.509	.5926	20.244	.6111	21.022	.6296	21.843	29
30	.5741	20.114	.5926	20.827	.6111	21.583	.6296	22.383	.6481	23.225	30
31	.5926	21.454	.6111	22.188	.6296	22.966	.6481	23.787	.6667	24.651	31
32	.6111	22.836	.6296	23.593	.6481	24.392	.6667	25.235	.6852	26.120	32
33	.6296	24.262	.6481	25.040	.6667	25.861	.6852	26.725	.7037	27.633	33
34	.6481	25.731	.6667	26.531	.6852	27.373	.7037	28.259	.7222	29.188	34
35	.6667	27.244	.6852	28.065	.7037	28.929	.7222	29.836	.7407	30.787	35
36	.6852	28.799	.7037	29.642	.7222	30.528	.7407	31.457	.7593	32.429	36
37	.7037	30.398	.7222	31.262	.7407	32.170	.7593	33.120	.7778	34.114	37
38	.7222	32.040	.7407	32.926	.7593	33.855	.7778	34.827	.7963	35.843	38
39	.7407	33.725	.7593	34.633	.7778	35.583	.7963	36.577	.8148	37.614	39
40	.7593	35.454	.7778	36.383	.7963	37.355	.8148	38.370	.8333	39.429	40
41	.7778	37.225	.7963	38.176	.8148	39.170	.8333	40.207	.8519	41.287	41
42	.7963	39.040	.8148	40.012	.8333	41.028	.8519	42.086	.8704	43.188	42
43	.8148	40.898	.8333	41.892	.8519	42.929	.8704	44.009	.8889	45.133	43
44	.8333	42.799	.8519	43.815	.8704	44.873	.8889	45.975	.9074	47.120	44
45	.8519	44.744	.8704	45.781	.8889	46.861	.9074	47.985	.9259	49.151	45
46	.8704	46.731	.8889	47.790	.9074	48.892	.9259	50.037	.9444	51.225	46
47	.8889	48.762	.9074	49.843	.9259	50.966	.9444	52.133	.9630	53.343	47
48	.9074	50.836	.9259	51.938	.9444	53.083	.9630	54.272	.9815	55.503	48
49	.9259	52.954	.9444	54.077	.9630	55.244	.9815	56.454	1.0000	57.707	49
50	.9444	55.114	.9630	56.259	.9815	57.448	1.0000	58.679	1.0185	59.954	50
	1		2		3		4		5		

TABLE XXVIII.—BASE 1—SLOPES $1\frac{3}{4}$ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	.778	.1296	1.059	.1481	1.383	.1667	1.750	.1852	2.160	0
1	.1296	.929	.1481	1.231	.1667	1.577	.1852	1.966	.2047	2.398	1
2	.1481	1.123	.1667	1.448	.1852	1.815	.2047	2.225	.2222	2.679	2
3	.1667	1.361	.1852	1.707	.2047	2.096	.2222	2.528	.2407	3.003	3
4	.1852	1.642	.2047	2.009	.2222	2.420	.2407	2.873	.2593	3.370	4
5	.2047	1.966	.2222	2.355	.2407	2.787	.2593	3.262	.2778	3.781	5
6	.2222	2.333	.2407	2.744	.2593	3.198	.2778	3.694	.2963	4.235	6
7	.2407	2.744	.2593	3.176	.2778	3.651	.2963	4.170	.3148	4.731	7
8	.2593	3.198	.2778	3.651	.2963	4.148	.3148	4.688	.3333	5.272	8
9	.2778	3.694	.2963	4.170	.3148	4.688	.3333	5.250	.3519	5.855	9
10	.2963	4.235	.3148	4.731	.3333	5.272	.3519	5.855	.3704	6.481	10
11	.3148	4.818	.3333	5.336	.3519	5.898	.3704	6.503	.3889	7.151	11
12	.3333	5.444	.3519	5.985	.3704	6.568	.3889	7.194	.4074	7.864	12
13	.3519	6.114	.3704	6.676	.3889	7.281	.4074	7.929	.4259	8.620	13
14	.3704	6.827	.3889	7.410	.4074	8.037	.4259	8.707	.4444	9.420	14
15	.3889	7.583	.4074	8.188	.4259	8.836	.4444	9.528	.4630	10.262	15
16	.4074	8.383	.4259	9.009	.4444	9.679	.4630	10.392	.4815	11.148	16
17	.4259	9.225	.4444	9.873	.4630	10.565	.4815	11.299	.5000	12.077	17
18	.4444	10.111	.4630	10.781	.4815	11.494	.5000	12.250	.5185	13.049	18
19	.4630	11.040	.4815	11.731	.5000	12.466	.5185	13.244	.5370	14.065	19
20	.4815	12.012	.5000	12.725	.5185	13.481	.5370	14.281	.5556	15.123	20
21	.5000	13.028	.5185	13.762	.5370	14.540	.5556	15.361	.5741	16.225	21
22	.5185	14.086	.5370	14.843	.5556	15.642	.5741	16.485	.5926	17.370	22
23	.5370	15.188	.5556	15.966	.5741	16.787	.5926	17.651	.6111	18.559	23
24	.5556	16.333	.5741	17.133	.5926	17.975	.6111	18.861	.6296	19.790	24
25	.5741	17.522	.5926	18.343	.6111	19.207	.6296	20.114	.6481	21.065	25
26	.5926	18.753	.6111	19.596	.6296	20.481	.6481	21.410	.6667	22.383	26
27	.6111	20.028	.6296	20.892	.6481	21.799	.6667	22.750	.6852	23.744	27
28	.6296	21.346	.6481	22.231	.6667	23.160	.6852	24.133	.7037	25.148	28
29	.6481	22.707	.6667	23.614	.6852	24.565	.7037	25.559	.7222	26.596	29
30	.6667	24.111	.6852	25.040	.7037	26.012	.7222	27.028	.7407	28.086	30
31	.6852	25.559	.7037	26.509	.7222	27.503	.7407	28.540	.7593	29.620	31
32	.7037	27.049	.7222	28.022	.7407	29.037	.7593	30.096	.7778	31.198	32
33	.7222	28.583	.7407	29.577	.7593	30.614	.7778	31.694	.7963	32.818	33
34	.7407	30.160	.7593	31.176	.7778	32.235	.7963	33.336	.8148	34.481	34
35	.7593	31.781	.7778	32.818	.7963	33.898	.8148	35.022	.8333	36.188	35
36	.7778	33.444	.7963	34.503	.8148	35.605	.8333	36.750	.8519	37.938	36
37	.7963	35.151	.8148	36.231	.8333	37.355	.8519	38.522	.8704	39.731	37
38	.8148	36.901	.8333	38.003	.8519	39.148	.8704	40.336	.8889	41.568	38
39	.8333	38.694	.8519	39.818	.8704	40.985	.8889	42.194	.9074	43.448	39
40	.8519	40.531	.8704	41.676	.8889	42.864	.9074	44.096	.9259	45.370	40
41	.8704	42.410	.8889	43.577	.9074	44.787	.9259	46.040	.9444	47.336	41
42	.8889	44.333	.9074	45.522	.9259	46.753	.9444	48.028	.9630	49.346	42
43	.9074	46.299	.9259	47.509	.9444	48.762	.9630	50.059	.9815	51.398	43
44	.9259	48.309	.9444	49.540	.9630	50.814	.9815	52.133	1.0000	53.494	44
45	.9444	50.361	.9630	51.614	.9815	52.910	1.0000	54.250	1.0185	55.633	45
46	.9630	52.457	.9815	53.731	1.0000	55.049	1.0185	56.410	1.0370	57.815	46
47	.9815	54.596	1.0000	55.892	1.0185	57.231	1.0370	58.614	1.0556	60.040	47
48	1.0000	56.778	1.0185	58.096	1.0370	59.457	1.0556	60.861	1.0741	62.309	48
49	1.0185	59.003	1.0370	60.343	1.0556	61.725	1.0741	63.151	1.0926	64.620	49
50	1.0370	61.272	1.0556	62.633	1.0741	64.037	1.0926	65.485	1.1111	66.975	50
	6		7		8		9		10		

TABLE XXVIII.—BASE 1—SLOPES 1¼ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	2.614	.2222	3.111	.2407	3.651	.2593	4.235	.2778	4.861	0
1	.2222	2.873	.2407	3.392	.2593	3.954	.2778	4.559	.2963	5.207	1
2	.2407	3.176	.2593	3.716	.2778	4.299	.2963	4.926	.3148	5.596	2
3	.2593	3.522	.2778	4.083	.2963	4.688	.3148	5.336	.3333	6.028	3
4	.2778	3.910	.2963	4.494	.3148	5.120	.3333	5.790	.3519	6.503	4
5	.2963	4.343	.3148	5.948	.3333	5.596	.3519	6.287	.3704	7.022	5
6	.3148	4.818	.3333	5.444	.3519	6.114	.3704	6.827	.3889	7.583	6
7	.3333	5.336	.3519	5.985	.3704	6.676	.3889	7.410	.4074	8.188	7
8	.3519	5.898	.3704	6.568	.3889	7.281	.4074	8.037	.4259	8.836	8
9	.3704	6.503	.3889	7.194	.4074	7.929	.4259	8.707	.4444	9.528	9
10	.3889	7.151	.4074	7.864	.4259	8.620	.4444	9.420	.4630	10.262	10
11	.4074	7.843	.4259	8.577	.4444	9.355	.4630	10.176	.4815	11.040	11
12	.4259	8.577	.4444	9.333	.4630	10.133	.4815	10.975	.5000	11.861	12
13	.4444	9.355	.4630	10.133	.4815	10.954	.5000	11.818	.5185	12.725	13
14	.4630	10.176	.4815	10.975	.5000	11.818	.5185	12.704	.5370	13.633	14
15	.4815	11.040	.5000	11.861	.5185	12.725	.5370	13.633	.5556	14.583	15
16	.5000	11.948	.5185	12.790	.5370	13.676	.5556	14.605	.5741	15.577	16
17	.5185	12.989	.5370	13.762	.5556	14.670	.5741	15.620	.5926	16.614	17
18	.5370	13.892	.5556	14.778	.5741	15.707	.5926	16.679	.6111	17.694	18
19	.5556	14.929	.5741	15.836	.5926	16.787	.6111	17.781	.6296	18.818	19
20	.5741	16.009	.5926	16.938	.6111	17.910	.6296	18.926	.6481	19.985	20
21	.5926	17.133	.6111	18.083	.6296	19.077	.6481	20.114	.6667	21.194	21
22	.6111	18.299	.6296	19.272	.6481	20.287	.6667	21.346	.6852	22.448	22
23	.6296	19.509	.6481	20.503	.6667	21.540	.6852	22.620	.7037	23.744	23
24	.6481	20.762	.6667	21.778	.6852	22.836	.7037	23.938	.7222	25.083	24
25	.6667	22.059	.6852	23.096	.7037	24.176	.7222	25.299	.7407	26.466	25
26	.6852	23.398	.7037	24.457	.7222	25.559	.7407	26.704	.7593	27.892	26
27	.7037	24.781	.7222	25.861	.7407	26.985	.7593	28.151	.7778	29.361	27
28	.7222	26.207	.7407	27.309	.7593	28.454	.7778	29.642	.7963	30.873	28
29	.7407	27.676	.7593	28.799	.7778	29.966	.7963	31.176	.8148	32.429	29
30	.7593	29.188	.7778	30.333	.7963	31.522	.8148	32.753	.8333	34.028	30
31	.7778	30.744	.7963	31.910	.8148	33.120	.8333	34.373	.8519	35.670	31
32	.7963	32.343	.8148	33.531	.8333	34.762	.8519	36.037	.8704	37.355	32
33	.8148	33.985	.8333	35.194	.8519	36.448	.8704	37.744	.8889	39.083	33
34	.8333	35.670	.8519	36.901	.8704	38.176	.8889	39.494	.9074	40.855	34
35	.8519	37.398	.8704	38.651	.8889	39.948	.9074	41.287	.9259	42.670	35
36	.8704	39.170	.8889	40.444	.9074	41.762	.9259	43.123	.9444	44.528	36
37	.8889	40.985	.9074	42.281	.9259	43.620	.9444	45.003	.9630	46.429	37
38	.9074	42.843	.9259	44.160	.9444	45.522	.9630	46.926	.9815	48.373	38
39	.9259	44.744	.9444	46.083	.9630	47.466	.9815	48.892	1.0000	50.361	39
40	.9444	46.688	.9630	48.049	.9815	49.454	1.0000	50.901	1.0185	52.392	40
41	.9630	48.676	.9815	50.059	1.0000	51.485	1.0185	52.954	1.0370	54.466	41
42	.9815	50.707	1.0000	52.111	1.0185	53.559	1.0370	55.049	1.0556	56.583	42
43	1.0000	52.781	1.0185	54.207	1.0370	55.676	1.0556	57.188	1.0741	58.744	43
44	1.0185	54.898	1.0370	56.346	1.0556	57.836	1.0741	59.370	1.0926	60.948	44
45	1.0370	57.059	1.0556	58.528	1.0741	60.040	1.0926	61.596	1.1111	63.194	45
46	1.0556	59.262	1.0741	60.753	1.0926	62.287	1.1111	63.864	1.1296	65.485	46
47	1.0741	61.509	1.0926	63.022	1.1111	64.577	1.1296	66.176	1.1481	67.818	47
48	1.0926	63.799	1.1111	65.333	1.1296	66.910	1.1481	68.531	1.1667	70.194	48
49	1.1111	66.133	1.1296	67.688	1.1481	69.287	1.1667	70.929	1.1852	72.614	49
50	1.1296	68.509	1.1481	70.086	1.1667	71.707	1.1852	73.370	1.2047	75.077	50
	11		12		13		14		15		

TABLE XXVIII.—BASE 1—SLOPES 1½ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	5.531	.3148	6.244	.3333	7.000	.3519	7.799	.3704	8.642	0
1	.3148	5.898	.3333	6.633	.3519	7.410	.3704	8.231	.3889	9.096	1
2	.3333	6.309	.3519	7.065	.3704	7.864	.3889	8.707	.4074	9.593	2
3	.3519	6.762	.3704	7.540	.3889	8.361	.4074	9.225	.4259	10.133	3
4	.3704	7.259	.3889	8.059	.4074	8.901	.4259	9.787	.4444	10.716	4
5	.3889	7.799	.4074	8.620	.4259	9.485	.4444	10.392	.4630	11.343	5
6	.4074	8.383	.4259	9.225	.4444	10.111	.4630	11.040	.4815	12.012	6
7	.4259	9.009	.4444	9.873	.4630	10.781	.4815	11.731	.5000	12.725	7
8	.4444	9.679	.4630	10.565	.4815	11.494	.5000	12.466	.5185	13.481	8
9	.4630	10.392	.4815	11.299	.5000	12.250	.5185	13.244	.5370	14.281	9
10	.4815	11.148	.5000	12.077	.5185	13.049	.5370	14.065	.5556	15.123	10
11	.5000	11.948	.5185	12.989	.5370	13.892	.5556	14.929	.5741	16.009	11
12	.5185	12.790	.5370	13.762	.5556	14.778	.5741	15.836	.5926	16.938	12
13	.5370	13.676	.5556	14.670	.5741	15.707	.5926	16.787	.6111	17.910	13
14	.5556	14.605	.5741	15.620	.5926	16.679	.6111	17.781	.6296	18.926	14
15	.5741	15.577	.5926	16.614	.6111	17.694	.6296	18.818	.6481	19.985	15
16	.5926	16.593	.6111	17.651	.6296	18.753	.6481	19.898	.6667	21.086	16
17	.6111	17.651	.6296	18.731	.6481	19.855	.6667	21.022	.6852	22.231	17
18	.6296	18.753	.6481	19.855	.6667	21.000	.6852	22.188	.7037	23.420	18
19	.6481	19.898	.6667	21.022	.6852	22.188	.7037	23.398	.7222	24.651	19
20	.6667	21.086	.6852	22.231	.7037	23.420	.7222	24.651	.7407	25.926	20
21	.6852	22.318	.7037	23.485	.7222	24.694	.7407	25.948	.7593	27.244	21
22	.7037	23.593	.7222	24.781	.7407	26.012	.7593	27.287	.7778	28.605	22
23	.7222	24.910	.7407	26.120	.7593	27.373	.7778	28.670	.7963	30.009	23
24	.7407	26.272	.7593	27.503	.7778	28.778	.7963	30.096	.8148	31.457	24
25	.7593	27.676	.7778	28.929	.7963	30.225	.8148	31.565	.8333	32.948	25
26	.7778	29.123	.7963	30.398	.8148	31.716	.8333	33.077	.8519	34.481	26
27	.7963	30.614	.8148	31.910	.8333	33.250	.8519	34.633	.8704	36.059	27
28	.8148	32.148	.8333	33.466	.8519	34.827	.8704	36.231	.8889	37.679	28
29	.8333	33.725	.8519	35.065	.8704	36.448	.8889	37.873	.9074	39.343	29
30	.8519	35.346	.8704	36.707	.8889	38.111	.9074	39.559	.9259	41.049	30
31	.8704	37.009	.8889	38.392	.9074	39.818	.9259	41.287	.9444	42.799	31
32	.8889	38.716	.9074	40.120	.9259	41.568	.9444	43.059	.9630	44.593	32
33	.9074	40.466	.9259	41.892	.9444	43.361	.9630	44.873	.9815	46.429	33
34	.9259	42.259	.9444	43.707	.9630	45.198	.9815	46.731	1.0000	48.309	34
35	.9444	44.096	.9630	45.565	.9815	47.077	1.0000	48.633	1.0185	50.231	35
36	.9630	45.975	.9815	47.466	1.0000	49.000	1.0185	50.577	1.0370	52.198	36
37	.9815	47.898	1.0000	49.410	1.0185	50.966	1.0370	52.565	1.0556	54.207	37
38	1.0000	49.864	1.0185	51.398	1.0370	52.975	1.0556	54.596	1.0741	56.259	38
39	1.0185	51.873	1.0370	53.429	1.0556	55.028	1.0741	56.670	1.0926	58.355	39
40	1.0370	53.926	1.0556	55.503	1.0741	57.123	1.0926	58.787	1.1111	60.494	40
41	1.0556	56.022	1.0741	57.620	1.0926	59.262	1.1111	60.948	1.1296	62.676	41
42	1.0741	58.160	1.0926	59.781	1.1111	61.444	1.1296	63.151	1.1481	64.901	42
43	1.0926	60.343	1.1111	61.985	1.1296	63.670	1.1481	65.398	1.1667	67.170	43
44	1.1111	62.568	1.1296	64.231	1.1481	65.938	1.1667	67.688	1.1852	69.481	44
45	1.1296	64.836	1.1481	66.522	1.1667	68.250	1.1852	70.022	1.2047	71.836	45
46	1.1481	67.148	1.1667	68.855	1.1852	70.605	1.2047	72.398	1.2222	74.235	46
47	1.1667	69.503	1.1852	71.231	1.2047	73.003	1.2222	74.818	1.2407	76.676	47
48	1.1852	71.901	1.2047	73.651	1.2222	75.444	1.2407	77.281	1.2593	79.160	48
49	1.2047	74.343	1.2222	76.114	1.2407	77.929	1.2593	79.787	1.2778	81.688	49
50	1.2222	76.827	1.2407	78.620	1.2593	80.457	1.2778	82.336	1.2963	84.259	50
	16		17		18		19		20		

TABLE XXVIII.—BASE 1—SLOPES $1\frac{3}{4}$ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	9.528	.4074	10.457	.4259	11.429	.4444	12.444	.4630	13.503	0
1	.4074	10.003	.4259	10.954	.4444	11.948	.4630	12.985	.4815	14.065	1
2	.4259	10.522	.4444	11.494	.4630	12.509	.4815	13.568	.5000	14.670	2
3	.4444	11.083	.4630	12.077	.4815	13.114	.5000	14.194	.5185	15.318	3
4	.4630	11.688	.4815	12.704	.5000	13.762	.5185	14.864	.5370	16.009	4
5	.4815	12.336	.5000	13.373	.5185	14.454	.5370	15.577	.5556	16.744	5
6	.5000	13.028	.5185	14.086	.5370	15.188	.5556	16.333	.5741	17.522	6
7	.5185	13.762	.5370	14.843	.5556	15.966	.5741	17.133	.5926	18.343	7
8	.5370	14.540	.5556	15.642	.5741	16.787	.5926	17.975	.6111	19.207	8
9	.5556	15.361	.5741	16.485	.5926	17.651	.6111	18.861	.6296	20.114	9
10	.5741	16.225	.5926	17.370	.6111	18.559	.6296	19.790	.6481	21.065	10
11	.5926	17.133	.6111	18.299	.6296	19.509	.6481	20.762	.6667	22.059	11
12	.6111	18.083	.6296	19.272	.6481	20.503	.6667	21.778	.6852	23.096	12
13	.6296	19.077	.6481	20.287	.6667	21.540	.6852	22.836	.7037	24.176	13
14	.6481	20.114	.6667	21.346	.6852	22.620	.7037	23.938	.7222	25.299	14
15	.6667	21.194	.6852	22.448	.7037	23.744	.7222	25.083	.7407	26.466	15
16	.6852	22.318	.7037	23.593	.7222	24.910	.7407	26.272	.7593	27.676	16
17	.7037	23.485	.7222	24.781	.7407	26.120	.7593	27.503	.7778	28.929	17
18	.7222	24.694	.7407	26.012	.7593	27.373	.7778	28.778	.7963	30.225	18
19	.7407	25.948	.7593	27.287	.7778	28.670	.7963	30.096	.8148	31.565	19
20	.7593	27.244	.7778	28.605	.7963	30.009	.8148	31.457	.8333	32.948	20
21	.7778	28.583	.7963	29.966	.8148	31.392	.8333	32.861	.8519	34.373	21
22	.7963	29.966	.8148	31.370	.8333	32.818	.8519	34.309	.8704	35.843	22
23	.8148	31.392	.8333	32.818	.8519	34.287	.8704	35.799	.8889	37.355	23
24	.8333	32.861	.8519	34.309	.8704	35.799	.8889	37.333	.9074	38.910	24
25	.8519	34.373	.8704	35.843	.8889	37.355	.9074	38.910	.9259	40.509	25
26	.8704	35.929	.8889	37.420	.9074	38.954	.9259	40.531	.9444	42.151	26
27	.8889	37.528	.9074	39.040	.9259	40.596	.9444	42.194	.9630	43.836	27
28	.9074	39.170	.9259	40.704	.9444	42.281	.9630	43.901	.9815	45.565	28
29	.9259	40.855	.9444	42.410	.9630	44.009	.9815	45.651	1.0000	47.336	29
30	.9444	42.583	.9630	44.160	.9815	45.781	1.0000	47.444	1.0185	49.151	30
31	.9630	44.355	.9815	45.954	1.0000	47.596	1.0185	49.281	1.0370	51.009	31
32	.9815	46.170	1.0000	47.790	1.0185	49.454	1.0370	51.160	1.0556	52.910	32
33	1.0000	48.028	1.0185	49.670	1.0370	51.355	1.0556	53.083	1.0741	54.855	33
34	1.0185	49.929	1.0370	51.593	1.0556	53.299	1.0741	55.049	1.0926	56.843	34
35	1.0370	51.873	1.0556	53.559	1.0741	55.287	1.0926	57.059	1.1111	58.873	35
36	1.0556	53.861	1.0741	55.568	1.0926	57.318	1.1111	59.111	1.1296	60.948	36
37	1.0741	55.892	1.0926	57.620	1.1111	59.392	1.1296	61.207	1.1481	63.065	37
38	1.0926	57.966	1.1111	59.716	1.1296	61.509	1.1481	63.346	1.1667	65.225	38
39	1.1111	60.083	1.1296	61.855	1.1481	63.670	1.1667	65.528	1.1852	67.429	39
40	1.1296	62.244	1.1481	64.037	1.1667	65.873	1.1852	67.753	1.2047	69.676	40
41	1.1481	64.448	1.1667	66.262	1.1852	68.120	1.2047	70.022	1.2222	71.966	41
42	1.1667	66.694	1.1852	68.531	1.2047	70.410	1.2222	72.333	1.2407	74.299	42
43	1.1852	68.985	1.2047	70.843	1.2222	72.744	1.2407	74.688	1.2593	76.676	43
44	1.2047	71.318	1.2222	73.198	1.2407	75.120	1.2593	77.086	1.2778	79.096	44
45	1.2222	73.694	1.2407	75.596	1.2593	77.540	1.2778	79.528	1.2963	81.559	45
46	1.2407	76.114	1.2593	78.037	1.2778	80.003	1.2963	82.012	1.3148	84.065	46
47	1.2593	78.577	1.2778	80.522	1.2963	82.509	1.3148	84.540	1.3333	86.614	47
48	1.2778	81.083	1.2963	83.049	1.3148	85.059	1.3333	87.111	1.3519	89.207	48
49	1.2963	83.633	1.3148	85.620	1.3333	87.651	1.3519	89.725	1.3704	91.843	49
50	1.3148	86.225	1.3333	88.235	1.3519	90.287	1.3704	92.383	1.3889	94.522	50
	21		22		23		24		25		

TABLE XXVIII.—BASE 1—SLOPES 1¼ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	14.605	.5000	15.750	.5185	16.938	.5370	18.170	.5556	19.444	0
1	.5000	15.188	.5185	16.355	.5370	17.565	.5556	18.818	.5741	20.114	1
2	.5185	15.815	.5370	17.003	.5556	18.235	.5741	19.509	.5926	20.827	2
3	.5370	16.485	.5556	17.694	.5741	18.948	.5926	20.244	.6111	21.583	3
4	.5556	17.198	.5741	18.429	.5926	19.704	.6111	21.022	.6296	22.383	4
5	.5741	17.954	.5926	19.207	.6111	20.503	.6296	21.843	.6481	23.225	5
6	.5926	18.753	.6111	20.028	.6296	21.346	.6481	22.707	.6667	24.111	6
7	.6111	19.596	.6296	20.892	.6481	22.231	.6667	23.614	.6852	25.040	7
8	.6296	20.481	.6481	21.799	.6667	23.160	.6852	24.565	.7037	26.012	8
9	.6481	21.410	.6667	22.750	.6852	24.133	.7037	25.559	.7222	27.028	9
10	.6667	22.383	.6852	23.744	.7037	25.148	.7222	26.596	.7407	28.086	10
11	.6852	23.398	.7037	24.781	.7222	26.207	.7407	27.676	.7593	29.188	11
12	.7037	24.457	.7222	25.861	.7407	27.309	.7593	28.799	.7778	30.333	12
13	.7222	25.559	.7407	26.985	.7593	28.454	.7778	29.966	.7963	31.522	13
14	.7407	26.704	.7593	28.151	.7778	29.642	.7963	31.176	.8148	32.755	14
15	.7593	27.892	.7778	29.361	.7963	30.873	.8148	32.429	.8333	34.028	15
16	.7778	29.123	.7963	30.614	.8148	32.148	.8333	33.725	.8519	35.346	16
17	.7963	30.398	.8148	31.910	.8333	33.466	.8519	35.065	.8704	36.707	17
18	.8148	31.716	.8333	33.250	.8519	34.827	.8704	36.448	.8889	38.111	18
19	.8333	33.077	.8519	34.633	.8704	36.231	.8889	37.875	.9074	39.559	19
20	.8519	34.481	.8704	36.059	.8889	37.679	.9074	39.343	.9259	41.049	20
21	.8704	35.929	.8889	37.528	.9074	39.170	.9259	40.855	.9444	42.583	21
22	.8889	37.420	.9074	39.040	.9259	40.704	.9444	42.410	.9630	44.160	22
23	.9074	38.954	.9259	40.596	.9444	42.281	.9630	44.009	.9815	45.781	23
24	.9259	40.531	.9444	42.194	.9630	43.901	.9815	45.651	1.0000	47.444	24
25	.9444	42.151	.9630	43.836	.9815	45.565	1.0000	47.336	1.0185	49.151	25
26	.9630	43.815	.9815	45.522	1.0000	47.272	1.0185	49.065	1.0370	50.901	26
27	.9815	45.522	1.0000	47.250	1.0185	49.022	1.0370	50.836	1.0556	52.694	27
28	1.0000	47.272	1.0185	49.022	1.0370	50.815	1.0556	52.651	1.0741	54.531	28
29	1.0185	49.065	1.0370	50.836	1.0556	52.651	1.0741	54.509	1.0926	56.410	29
30	1.0370	50.901	1.0556	52.694	1.0741	54.531	1.0926	56.410	1.1111	58.333	30
31	1.0556	52.781	1.0741	54.596	1.0926	56.454	1.1111	58.355	1.1296	60.299	31
32	1.0741	54.704	1.0926	56.540	1.1111	58.420	1.1296	60.343	1.1481	62.309	32
33	1.0926	56.670	1.1111	58.528	1.1296	60.429	1.1481	62.373	1.1667	64.361	33
34	1.1111	58.679	1.1296	60.559	1.1481	62.481	1.1667	64.448	1.1852	66.457	34
35	1.1296	60.731	1.1481	62.633	1.1667	64.577	1.1852	66.565	1.2047	68.596	35
36	1.1481	62.827	1.1667	64.750	1.1852	66.716	1.2047	68.725	1.2222	70.778	36
37	1.1667	64.966	1.1852	66.910	1.2047	68.898	1.2222	70.929	1.2407	73.003	37
38	1.1852	67.148	1.2047	69.114	1.2222	71.123	1.2407	73.176	1.2593	75.272	38
39	1.2047	69.373	1.2222	71.361	1.2407	73.392	1.2593	75.466	1.2778	77.583	39
40	1.2222	71.642	1.2407	73.651	1.2593	75.704	1.2778	77.799	1.2963	79.938	40
41	1.2407	73.954	1.2593	75.985	1.2778	78.059	1.2963	80.176	1.3148	82.336	41
42	1.2593	76.309	1.2778	78.361	1.2963	80.457	1.3148	82.596	1.3333	84.778	42
43	1.2778	78.707	1.2963	80.781	1.3148	82.898	1.3333	85.059	1.3519	87.262	43
44	1.2963	81.148	1.3148	83.244	1.3333	85.383	1.3519	87.565	1.3704	89.790	44
45	1.3148	83.633	1.3333	85.750	1.3519	87.910	1.3704	90.114	1.3889	92.361	45
46	1.3333	86.160	1.3519	88.299	1.3704	90.481	1.3889	92.707	1.4074	94.975	46
47	1.3519	88.731	1.3704	90.892	1.3889	93.096	1.4074	95.343	1.4259	97.633	47
48	1.3704	91.346	1.3889	93.528	1.4074	95.753	1.4259	98.022	1.4444	100.333	48
49	1.3889	94.003	1.4074	96.207	1.4259	98.454	1.4444	100.744	1.4630	103.077	59
50	1.4074	96.704	1.4259	98.929	1.4444	101.198	1.4630	103.509	1.4815	105.864	50
	26		27		28		29		30		

TABLE XXVIII.—BASE 1—SLOPES $1\frac{3}{4}$ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	20.762	.5926	22.123	.6111	23.528	.6296	24.975	.6481	26.466	0
1	.5926	21.454	.6111	22.836	.6296	24.262	.6481	25.731	.6667	27.244	1
2	.6111	22.188	.6296	23.593	.6481	25.040	.6667	26.531	.6852	28.065	2
3	.6296	22.966	.6481	24.392	.6667	25.861	.6852	27.373	.7037	28.929	3
4	.6481	23.787	.6667	25.235	.6852	26.725	.7037	28.259	.7222	29.836	4
5	.6667	24.651	.6852	26.120	.7037	27.633	.7222	29.188	.7407	30.787	5
6	.6852	25.559	.7037	27.049	.7222	28.583	.7407	30.160	.7593	31.781	6
7	.7037	26.509	.7222	28.022	.7407	29.577	.7593	31.176	.7778	32.818	7
8	.7222	27.503	.7407	29.037	.7593	30.614	.7778	32.235	.7963	33.898	8
9	.7407	28.540	.7593	30.096	.7778	31.694	.7963	33.336	.8148	35.022	9
10	.7593	29.620	.7778	31.198	.7963	32.818	.8148	34.481	.8333	36.188	10
11	.7778	30.744	.7963	32.343	.8148	33.985	.8333	35.670	.8519	37.398	11
12	.7963	31.910	.8148	33.531	.8333	35.194	.8519	36.901	.8704	38.651	12
13	.8148	33.120	.8333	34.762	.8519	36.448	.8704	38.176	.8889	39.948	13
14	.8333	34.373	.8519	36.037	.8704	37.744	.8889	39.494	.9074	41.287	14
15	.8519	35.670	.8704	37.355	.8889	39.083	.9074	40.855	.9259	42.670	15
16	.8704	37.009	.8889	38.716	.9074	40.466	.9259	42.259	.9444	44.096	16
17	.8889	38.392	.9074	40.120	.9259	41.892	.9444	43.707	.9630	45.565	17
18	.9074	39.818	.9259	41.568	.9444	43.361	.9630	45.198	.9815	47.077	18
19	.9259	41.287	.9444	43.059	.9630	44.873	.9815	46.731	1.0000	48.633	19
20	.9444	42.799	.9630	44.593	.9815	46.429	1.0000	48.309	1.0185	50.231	20
21	.9630	44.355	.9815	46.170	1.0000	48.028	1.0185	49.929	1.0370	51.873	21
22	.9815	45.954	1.0000	47.790	1.0185	49.670	1.0370	51.593	1.0556	53.559	22
23	1.0000	47.596	1.0185	49.454	1.0370	51.355	1.0556	53.299	1.0741	55.287	23
24	1.0185	49.281	1.0370	51.160	1.0556	53.083	1.0741	55.049	1.0926	57.059	24
25	1.0370	51.009	1.0556	52.910	1.0741	54.855	1.0926	56.843	1.1111	58.873	25
26	1.0556	52.781	1.0741	54.704	1.0926	56.670	1.1111	58.679	1.1296	60.731	26
27	1.0741	54.596	1.0926	56.540	1.1111	58.528	1.1296	60.559	1.1481	62.633	27
28	1.0926	56.454	1.1111	58.420	1.1296	60.429	1.1481	62.481	1.1667	64.577	28
29	1.1111	58.355	1.1296	60.343	1.1481	62.373	1.1667	64.448	1.1852	66.565	29
30	1.1296	60.299	1.1481	62.309	1.1667	64.361	1.1852	66.457	1.2047	68.596	30
31	1.1481	62.287	1.1667	64.318	1.1852	66.392	1.2047	68.509	1.2222	70.670	31
32	1.1667	64.318	1.1852	66.370	1.2047	68.466	1.2222	70.605	1.2407	72.787	32
33	1.1852	66.392	1.2047	68.466	1.2222	70.583	1.2407	72.744	1.2593	74.948	33
34	1.2047	68.509	1.2222	70.605	1.2407	72.744	1.2593	74.926	1.2778	77.151	34
35	1.2222	70.670	1.2407	72.787	1.2593	74.948	1.2778	77.151	1.2963	79.398	35
36	1.2407	72.873	1.2593	75.012	1.2778	77.194	1.2963	79.420	1.3148	81.688	36
37	1.2593	75.120	1.2778	77.281	1.2963	79.485	1.3148	81.731	1.3333	84.022	37
38	1.2778	77.410	1.2963	79.593	1.3148	81.818	1.3333	84.086	1.3519	86.398	38
39	1.2963	79.744	1.3148	81.948	1.3333	84.194	1.3519	86.485	1.3704	88.818	39
40	1.3148	82.120	1.3333	84.346	1.3519	86.614	1.3704	88.926	1.3889	91.281	40
41	1.3333	84.540	1.3519	86.787	1.3704	89.077	1.3889	91.410	1.4074	93.787	41
42	1.3519	87.003	1.3704	89.272	1.3889	91.583	1.4074	93.938	1.4259	96.336	42
43	1.3704	89.509	1.3889	91.799	1.4074	94.133	1.4259	96.509	1.4444	98.929	43
44	1.3889	92.059	1.4074	94.370	1.4259	96.725	1.4444	99.123	1.4630	101.565	44
45	1.4074	94.651	1.4259	96.985	1.4444	99.361	1.4630	101.781	1.4815	104.244	45
46	1.4259	97.287	1.4444	99.642	1.4630	102.040	1.4815	104.481	1.5000	106.966	46
47	1.4444	99.966	1.4630	102.343	1.4815	104.762	1.5000	107.225	1.5185	109.731	47
48	1.4630	102.688	1.4815	105.086	1.5000	107.528	1.5185	110.012	1.5370	112.540	48
49	1.4815	105.454	1.5000	107.873	1.5185	110.336	1.5370	112.843	1.5556	115.392	49
50	1.5000	108.262	1.5185	110.704	1.5370	113.168	1.5556	115.716	1.5741	118.287	50
	31		32		33		34		35		

TABLE XXVIII.—BASE 1—SLOPES 1¾ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	28.000	.6852	29.577	.7037	31.198	.7222	32.861	.7407	34.568	0
1	.6852	28.799	.7037	30.398	.7222	32.040	.7407	33.725	.7593	35.454	1
2	.7037	29.642	.7222	31.262	.7407	32.926	.7593	34.633	.7778	36.383	2
3	.7222	30.528	.7407	32.170	.7593	33.855	.7778	35.583	.7963	37.355	3
4	.7407	31.457	.7593	33.120	.7778	34.827	.7963	36.577	.8148	38.370	4
5	.7593	32.429	.7778	34.114	.7963	35.843	.8148	37.614	.8333	39.429	5
6	.7778	33.444	.7963	35.151	.8148	36.901	.8333	38.694	.8519	40.531	6
7	.7963	34.503	.8148	36.231	.8333	38.003	.8519	39.818	.8704	41.676	7
8	.8148	35.605	.8333	37.355	.8519	39.148	.8704	40.985	.8889	42.864	8
9	.8333	36.750	.8519	38.522	.8704	40.336	.8889	42.194	.9074	44.096	9
10	.8519	37.938	.8704	39.731	.8889	41.568	.9074	43.448	.9259	45.370	10
11	.8704	39.170	.8889	40.985	.9074	42.843	.9259	44.744	.9444	46.688	11
12	.8889	40.444	.9074	42.281	.9259	44.160	.9444	46.083	.9630	48.049	12
13	.9074	41.762	.9259	43.620	.9444	45.522	.9630	47.466	.9815	49.454	13
14	.9259	43.123	.9444	45.003	.9630	46.926	.9815	48.892	1.0000	50.901	14
15	.9444	44.528	.9630	46.429	.9815	48.373	1.0000	50.361	1.0185	52.392	15
16	.9630	45.975	.9815	47.898	1.0000	49.864	1.0185	51.873	1.0370	53.926	16
17	.9815	47.466	1.0000	49.410	1.0185	51.398	1.0370	53.429	1.0556	55.503	17
18	1.0000	49.000	1.0185	50.966	1.0370	52.975	1.0556	55.028	1.0741	57.123	18
19	1.0185	50.577	1.0370	52.565	1.0556	54.596	1.0741	56.670	1.0926	58.787	19
20	1.0370	52.198	1.0556	54.207	1.0741	56.259	1.0926	58.355	1.1111	60.494	20
21	1.0556	53.861	1.0741	55.892	1.0926	57.966	1.1111	60.083	1.1296	62.244	21
22	1.0741	55.568	1.0926	57.620	1.1111	59.716	1.1296	61.855	1.1481	64.037	22
23	1.0926	57.318	1.1111	59.392	1.1296	61.509	1.1481	63.670	1.1667	65.873	23
24	1.1111	59.111	1.1296	61.207	1.1481	63.346	1.1667	65.528	1.1852	67.753	24
25	1.1296	60.948	1.1481	63.065	1.1667	65.225	1.1852	67.429	1.2047	69.676	25
26	1.1481	62.827	1.1667	64.966	1.1852	67.148	1.2047	69.373	1.2222	71.642	26
27	1.1667	64.750	1.1852	66.910	1.2047	69.114	1.2222	71.361	1.2407	73.651	27
28	1.1852	66.716	1.2047	68.898	1.2222	71.123	1.2407	73.392	1.2593	75.704	28
29	1.2047	68.725	1.2222	70.929	1.2407	73.176	1.2593	75.466	1.2778	77.799	29
30	1.2222	70.778	1.2407	73.003	1.2593	75.272	1.2778	77.583	1.2963	79.938	30
31	1.2407	72.873	1.2593	75.120	1.2778	77.410	1.2963	79.744	1.3148	82.120	31
32	1.2593	75.012	1.2778	77.281	1.2963	79.593	1.3148	81.948	1.3333	84.346	32
33	1.2778	77.194	1.2963	79.485	1.3148	81.818	1.3335	84.194	1.3519	86.614	33
34	1.2963	79.420	1.3148	81.731	1.3333	84.086	1.3519	86.485	1.3704	88.926	34
35	1.3148	81.688	1.3333	84.022	1.3519	86.398	1.3704	88.818	1.3889	91.281	35
36	1.3333	84.000	1.3519	86.355	1.3704	88.753	1.3889	91.194	1.4074	93.679	36
37	1.3519	86.355	1.3704	88.731	1.3889	91.151	1.4074	93.614	1.4259	96.120	37
38	1.3704	88.753	1.3889	91.151	1.4074	93.593	1.4259	96.077	1.4444	98.605	38
39	1.3889	91.194	1.4074	93.614	1.4259	96.077	1.4444	98.583	1.4630	101.133	39
40	1.4074	93.679	1.4259	96.120	1.4444	98.605	1.4630	101.133	1.4815	103.704	40
41	1.4259	96.207	1.4444	98.670	1.4630	101.176	1.4815	103.725	1.5000	106.318	41
42	1.4444	98.778	1.4630	101.262	1.4815	103.790	1.5000	106.361	1.5185	108.975	42
43	1.4630	101.392	1.4815	103.989	1.5000	106.448	1.5185	109.040	1.5370	111.676	43
44	1.4815	104.049	1.5000	106.577	1.5185	109.148	1.5370	111.762	1.5556	114.420	44
45	1.5000	106.750	1.5185	109.299	1.5370	111.892	1.5556	114.528	1.5741	117.207	45
46	1.5185	109.494	1.5370	112.065	1.5556	114.679	1.5741	117.336	1.5926	120.037	46
47	1.5370	112.281	1.5556	114.873	1.5741	117.509	1.5926	120.188	1.6111	122.910	47
48	1.5556	115.111	1.5741	117.725	1.5926	120.383	1.6111	123.083	1.6296	125.827	48
49	1.5741	117.985	1.5926	120.620	1.6111	123.299	1.6296	126.022	1.6481	128.787	49
50	1.5926	120.901	1.6111	123.559	1.6296	126.259	1.6481	129.003	1.6667	131.790	50
	36		37		38		39		40		

TABLE XXVIII.—BASE I—SLOPES $1\frac{3}{4}$ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	36.318	.7778	38.111	.7963	39.948	.8148	41.827	.8333	43.750	0
1	.7778	37.225	.7963	39.040	.8148	40.898	.8333	42.799	.8519	44.744	1
2	.7963	38.176	.8148	40.012	.8333	41.892	.8519	43.815	.8704	45.781	2
3	.8148	39.170	.8333	41.028	.8519	42.929	.8704	44.873	.8889	46.861	3
4	.8333	40.207	.8519	42.086	.8704	44.009	.8889	45.975	.9074	47.985	4
5	.8519	41.287	.8704	43.188	.8889	45.133	.9074	47.120	.9259	49.151	5
6	.8704	42.410	.8889	44.333	.9074	46.299	.9259	48.309	.9444	50.361	6
7	.8889	43.577	.9074	45.522	.9259	47.509	.9444	49.540	.9630	51.614	7
8	.9074	44.787	.9259	46.753	.9444	48.762	.9630	50.814	.9815	52.910	8
9	.9259	46.040	.9444	48.028	.9630	50.059	.9815	52.133	1.0000	54.250	9
10	.9444	47.336	.9630	49.346	.9815	51.398	1.0000	53.494	1.0185	55.633	10
11	.9630	48.676	.9815	50.707	1.0000	52.781	1.0185	54.898	1.0370	57.059	11
12	.9815	50.059	1.0000	52.111	1.0185	54.207	1.0370	56.346	1.0556	58.528	12
13	1.0000	51.485	1.0185	53.559	1.0370	55.676	1.0556	57.836	1.0741	60.040	13
14	1.0185	52.954	1.0370	55.049	1.0556	57.188	1.0741	59.370	1.0926	61.596	14
15	1.0370	54.466	1.0556	56.583	1.0741	58.744	1.0926	60.948	1.1111	63.194	15
16	1.0556	56.022	1.0741	58.160	1.0926	60.343	1.1111	62.568	1.1296	64.836	16
17	1.0741	57.620	1.0926	59.781	1.1111	61.985	1.1296	64.231	1.1481	66.522	17
18	1.0926	59.262	1.1111	61.444	1.1296	63.670	1.1481	65.938	1.1667	68.250	18
19	1.1111	60.948	1.1296	63.151	1.1481	65.398	1.1667	67.688	1.1852	70.022	19
20	1.1296	62.676	1.1481	64.901	1.1667	67.170	1.1852	69.481	1.2047	71.836	20
21	1.1481	64.448	1.1667	66.694	1.1852	68.985	1.2047	71.318	1.2222	73.694	21
22	1.1667	66.262	1.1852	68.531	1.2047	70.843	1.2222	73.198	1.2407	75.596	22
23	1.1852	68.120	1.2047	70.410	1.2222	72.744	1.2407	75.120	1.2593	77.540	23
24	1.2047	70.022	1.2222	72.333	1.2407	74.688	1.2593	77.086	1.2778	79.528	24
25	1.2222	71.966	1.2407	74.299	1.2593	76.676	1.2778	79.096	1.2963	81.559	25
26	1.2407	73.954	1.2593	76.309	1.2778	78.707	1.2963	81.148	1.3148	83.633	26
27	1.2593	75.985	1.2778	78.361	1.2963	80.781	1.3148	83.244	1.3333	85.750	27
28	1.2778	78.059	1.2963	80.457	1.3148	82.898	1.3333	85.383	1.3519	87.910	28
29	1.2963	80.176	1.3148	82.596	1.3333	85.059	1.3519	87.565	1.3704	90.114	29
30	1.3148	82.336	1.3333	84.778	1.3519	87.262	1.3704	89.790	1.3889	92.361	30
31	1.3333	84.540	1.3519	87.003	1.3704	89.509	1.3889	92.059	1.4074	94.651	31
32	1.3519	86.787	1.3704	89.272	1.3889	91.799	1.4074	94.370	1.4259	96.985	32
33	1.3704	89.077	1.3889	91.583	1.4074	94.133	1.4259	96.725	1.4444	99.361	33
34	1.3889	91.410	1.4074	93.938	1.4259	96.509	1.4444	99.123	1.4630	101.781	34
35	1.4074	93.787	1.4259	96.336	1.4444	98.929	1.4630	101.565	1.4815	104.244	35
36	1.4259	96.207	1.4444	98.778	1.4630	101.392	1.4815	104.049	1.5000	106.750	36
37	1.4444	98.670	1.4630	101.262	1.4815	103.989	1.5000	106.577	1.5185	109.299	37
38	1.4630	101.176	1.4815	103.790	1.5000	106.448	1.5185	109.148	1.5370	111.892	38
39	1.4815	103.725	1.5000	106.361	1.5185	109.040	1.5370	111.762	1.5556	114.528	39
40	1.5000	106.318	1.5185	108.975	1.5370	111.676	1.5556	114.420	1.5741	117.207	40
41	1.5185	108.954	1.5370	111.633	1.5556	114.355	1.5741	117.120	1.5926	119.929	41
42	1.5370	111.633	1.5556	114.333	1.5741	117.077	1.5926	119.864	1.6111	122.694	42
43	1.5556	114.355	1.5741	117.077	1.5926	119.843	1.6111	122.651	1.6296	125.503	43
44	1.5741	117.120	1.5926	119.864	1.6111	122.651	1.6296	125.481	1.6481	128.355	44
45	1.5926	119.929	1.6111	122.694	1.6296	125.503	1.6481	128.355	1.6667	131.250	45
46	1.6111	122.781	1.6296	125.568	1.6481	128.398	1.6667	131.272	1.6852	134.188	46
47	1.6296	125.676	1.6481	128.485	1.6667	131.336	1.6852	134.231	1.7037	137.170	47
48	1.6481	128.614	1.6667	131.444	1.6852	134.318	1.7037	137.235	1.7222	140.194	48
49	1.6667	131.596	1.6852	134.448	1.7037	137.343	1.7222	140.281	1.7407	143.262	49
50	1.6852	134.620	1.7037	137.494	1.7222	140.410	1.7407	143.370	1.7593	146.373	50
	41		42		43		44		45		

TABLE XXVIII.—BASE I—SLOPES 1¾ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	45.716	.8704	47.725	.8889	49.778	.9074	51.873	.9259	54.012	0
1	.8704	46.731	.8889	48.762	.9074	50.836	.9259	52.954	.9444	55.114	1
2	.8889	47.790	.9074	49.843	.9259	51.938	.9444	54.077	.9630	56.259	2
3	.9074	48.892	.9259	50.966	.9444	53.083	.9630	55.244	.9815	57.448	3
4	.9259	50.037	.9444	52.133	.9630	54.272	.9815	56.454	1.0000	58.679	4
5	.9444	51.225	.9630	53.343	.9815	55.503	1.0000	57.707	1.0185	59.954	5
6	.9630	52.457	.9815	54.596	1.0000	56.778	1.0185	59.003	1.0370	61.272	6
7	.9815	53.731	1.0000	55.892	1.0185	58.096	1.0370	60.343	1.0556	62.633	7
8	1.0000	55.049	1.0185	57.231	1.0370	59.457	1.0556	61 725	1.0741	64.037	8
9	1.0185	56.410	1.0370	58.614	1.0556	60.861	1.0741	63.151	1.0926	65.485	9
10	1.0370	57.815	1.0556	60.040	1.0741	62.309	1.0926	64.620	1.1111	66.975	10
11	1.0556	59.262	1.0741	61.509	1.0926	63.799	1.1111	66.133	1.1296	68.509	11
12	1.0741	60.753	1.0926	63.022	1.1111	65.333	1.1296	67.688	1.1481	70.086	12
13	1.0926	62.287	1.1111	64.577	1.1296	66.910	1.1481	69.287	1.1667	71.707	13
14	1.1111	63.864	1.1296	66.176	1.1481	68.531	1.1667	70.929	1.1852	73.370	14
15	1.1296	65.485	1.1481	67.818	1.1667	70.194	1.1852	72.614	1.2047	75.077	15
16	1.1481	67.148	1.1667	69.503	1.1852	71.901	1.2047	74.343	1.2222	76.827	16
17	1.1667	68.855	1.1852	71.231	1.2047	73.651	1.2222	76.114	1.2407	78.620	17
18	1.1852	70.605	1.2047	73.003	1.2222	75.444	1.2407	77.929	1.2593	80.457	18
19	1.2047	72.398	1.2222	74.818	1.2407	77.281	1.2593	79.787	1.2778	82.336	19
20	1.2222	74.235	1.2407	76.676	1.2593	79.160	1.2778	81.688	1.2963	84.259	20
21	1.2407	76.114	1.2593	78.577	1.2778	81.083	1.2963	83.633	1.3148	86.225	21
22	1.2593	78.037	1.2778	80.522	1.2963	83.049	1.3148	85.620	1.3333	88.235	22
23	1.2778	80.003	1.2963	82.509	1.3148	85.059	1.3333	87.651	1.3519	90.287	23
24	1.2963	82.012	1.3148	84.540	1.3333	87.111	1.3519	89.725	1.3704	92.383	24
25	1.3148	84.065	1.3333	86.614	1.3519	89.207	1.3704	91.843	1.3889	94.522	25
26	1.3333	86.160	1.3519	88.731	1.3704	91.346	1.3889	94.003	1.4074	96.704	26
27	1.3519	88.299	1.3704	90.892	1.3889	93.528	1.4074	96.207	1.4259	98.929	27
28	1.3704	90.481	1.3889	93.096	1.4074	95.753	1.4259	98.454	1.4444	101.198	28
29	1.3889	92.707	1.4074	95.343	1.4259	98.022	1.4444	100.744	1.4630	103.509	29
30	1.4074	94.975	1.4259	97.633	1.4444	100.333	1.4630	103.077	1.4815	105.864	30
31	1.4259	97.287	1.4444	99.966	1.4630	102.688	1.4815	105.454	1.5000	108.262	31
32	1.4444	99.642	1.4630	102.343	1.4815	105.086	1.5000	107.873	1.5185	110.704	32
33	1.4630	102.040	1.4815	104.762	1.5000	107.528	1.5185	110.336	1.5370	113.118	33
34	1.4815	104.481	1.5000	107.225	1.5185	110.012	1.5370	112.843	1.5556	115.716	34
35	1.5000	106.966	1.5185	109.731	1.5370	112.540	1.5556	115.392	1.5741	118.287	35
36	1.5185	109.494	1.5370	112.281	1.5556	115.111	1.5741	117.985	1.5926	120.901	36
37	1.5370	112.065	1.5556	114.873	1.5741	117.725	1.5926	120.620	1.6111	123.559	37
38	1.5556	114.679	1.5741	117.509	1.5926	120.383	1.6111	123.299	1.6296	126.259	38
39	1.5741	117.336	1.5926	120.188	1.6111	123.083	1.6296	126.022	1.6481	129.003	39
40	1.5926	120.037	1.6111	122.910	1.6296	125.827	1.6481	128.787	1.6667	131.790	40
41	1.6111	122.781	1.6296	125.676	1.6481	128.614	1.6667	131.596	1.6852	134.620	41
42	1.6296	125.568	1.6481	128.485	1.6667	131.444	1.6852	134.448	1.7037	137.494	42
43	1.6481	128.398	1.6667	131.336	1.6852	134.318	1.7037	137.343	1.7222	140.410	43
44	1.6667	131.272	1.6852	134.231	1.7037	137.235	1.7222	140.281	1.7407	143.370	44
45	1.6852	134.188	1.7037	137.170	1.7222	140.194	1.7407	143.262	1.7593	146.373	45
46	1.7037	137.148	1.7222	140.151	1.7407	143.198	1.7593	146.287	1.7778	149.420	46
47	1.7222	140.151	1.7407	143.176	1.7593	146.244	1.7778	149.355	1.7963	152.509	47
48	1.7407	143.198	1.7593	146.244	1.7778	149.333	1.7963	152.466	1.8148	155.642	48
49	1.7593	146.287	1.7778	149.355	1.7963	152.466	1.8148	155.620	1.8333	158.818	49
50	1.7778	149.420	1.7963	152.509	1.8148	155.642	1.8333	158.818	1.8519	162.037	50
	46		47		48		49		50		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.025	.0370	0.099	.0556	0.222	.0741	0.395	.0926	0.617	0
1	.0370	0.074	.0556	0.173	.0741	0.321	.0926	0.519	.1111	0.765	1
2	.0556	0.173	.0741	0.296	.0926	0.469	.1111	0.691	.1296	0.963	2
3	.0741	0.321	.0926	0.469	.1111	0.667	.1296	0.914	.1481	1.210	3
4	.0926	0.519	.1111	0.691	.1296	0.914	.1481	1.185	.1667	1.506	4
5	.1111	0.765	.1296	0.963	.1481	1.210	.1667	1.506	.1852	1.852	5
6	.1296	1.062	.1481	1.284	.1667	1.556	.1852	1.877	.2047	2.247	6
7	.1481	1.407	.1667	1.654	.1852	1.951	.2047	2.296	.2222	2.691	7
8	.1667	1.802	.1852	2.074	.2047	2.395	.2222	2.765	.2407	3.185	8
9	.1852	2.247	.2047	2.543	.2222	2.889	.2407	3.284	.2593	3.728	9
10	.2047	2.741	.2222	3.062	.2407	3.432	.2593	3.852	.2778	4.321	10
11	.2222	3.284	.2407	3.630	.2593	4.025	.2778	4.469	.2963	4.963	11
12	.2407	3.877	.2593	4.247	.2778	4.667	.2963	5.136	.3148	5.654	12
13	.2593	4.519	.2778	4.914	.2963	5.358	.3148	5.852	.3333	6.395	13
14	.2778	5.210	.2963	5.630	.3148	6.099	.3333	6.617	.3519	7.185	14
15	.2963	5.951	.3148	6.395	.3333	6.889	.3519	7.432	.3704	8.025	15
16	.3148	6.741	.3333	7.210	.3519	7.728	.3704	8.296	.3889	8.914	16
17	.3333	7.580	.3519	8.074	.3704	8.617	.3889	9.210	.4074	9.852	17
18	.3519	8.469	.3704	8.988	.3889	9.556	.4074	10.173	.4259	10.840	18
19	.3704	9.407	.3889	9.951	.4074	10.543	.4259	11.185	.4444	11.877	19
20	.3889	10.395	.4074	10.963	.4259	11.580	.4444	12.247	.4630	12.963	20
21	.4074	11.432	.4259	12.025	.4444	12.667	.4630	13.358	.4815	14.099	21
22	.4259	12.519	.4444	13.136	.4630	13.802	.4815	14.519	.5000	15.284	22
23	.4444	13.654	.4630	14.296	.4815	14.988	.5000	15.728	.5185	16.519	23
24	.4630	14.840	.4815	15.506	.5000	16.222	.5185	16.988	.5370	17.802	24
25	.4815	16.074	.5000	16.765	.5185	17.506	.5370	18.296	.5556	19.136	25
26	.5000	17.358	.5185	18.074	.5370	18.840	.5556	19.654	.5741	20.519	26
27	.5185	18.691	.5370	19.432	.5556	20.222	.5741	21.062	.5926	21.951	27
28	.5370	20.074	.5556	20.840	.5741	21.654	.5926	22.519	.6111	23.432	28
29	.5556	21.506	.5741	22.296	.5926	23.136	.6111	24.025	.6296	24.963	29
30	.5741	22.988	.5926	23.802	.6111	24.667	.6296	25.580	.6481	26.543	30
31	.5926	24.519	.6111	25.358	.6296	26.247	.6481	27.185	.6667	28.173	31
32	.6111	26.099	.6296	26.963	.6481	27.877	.6667	28.840	.6852	29.852	32
33	.6296	27.728	.6481	28.617	.6667	29.556	.6852	30.543	.7037	31.580	33
34	.6481	29.407	.6667	30.321	.6852	31.284	.7037	32.296	.7222	33.358	34
35	.6667	31.136	.6852	32.074	.7037	33.062	.7222	34.099	.7407	35.185	35
36	.6852	32.914	.7037	33.877	.7222	34.889	.7407	35.951	.7593	37.062	36
37	.7037	34.741	.7222	35.728	.7407	36.765	.7593	37.852	.7778	38.988	37
38	.7222	36.617	.7407	37.630	.7593	38.691	.7778	39.802	.7963	40.963	38
39	.7407	38.543	.7593	39.580	.7778	40.667	.7963	41.802	.8148	42.988	39
40	.7593	40.519	.7778	41.580	.7963	42.691	.8148	43.852	.8333	45.062	40
41	.7778	42.543	.7963	43.630	.8148	44.765	.8333	45.951	.8519	47.185	41
42	.7963	44.617	.8148	45.728	.8333	46.889	.8519	48.099	.8704	49.358	42
43	.8148	46.741	.8333	47.877	.8519	49.062	.8704	50.296	.8889	51.580	43
44	.8333	48.914	.8519	50.074	.8704	51.284	.8889	52.543	.9074	53.852	44
45	.8519	51.136	.8704	52.321	.8889	53.556	.9074	54.840	.9259	56.173	45
46	.8704	53.407	.8889	54.617	.9074	55.877	.9259	57.185	.9444	58.543	46
47	.8889	55.728	.9074	56.963	.9259	58.247	.9444	59.580	.9630	60.963	47
48	.9074	58.099	.9259	59.358	.9444	60.667	.9630	62.025	.9815	63.432	48
49	.9259	60.519	.9444	61.802	.9630	63.136	.9815	64.519	1.0000	65.951	49
50	.9444	62.988	.9630	64.296	.9815	65.654	1.0000	67.062	1.0185	68.519	50
	1		2		3		4		5		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	0.889	.1296	1.210	.1481	1.580	.1667	2.000	.1852	2.469	0
1	.1296	1.062	.1481	1.407	.1667	1.802	.1852	2.247	.2047	2.741	1
2	.1481	1.284	.1667	1.654	.1852	2.074	.2047	2.543	.2222	3.062	2
3	.1667	1.556	.1852	1.951	.2047	2.395	.2222	2.889	.2407	3.432	3
4	.1852	1.877	.2047	2.296	.2222	2.765	.2407	3.284	.2593	3.852	4
5	.2047	2.247	.2222	2.691	.2407	3.185	.2593	3.728	.2778	4.321	5
6	.2222	2.667	.2407	3.136	.2593	3.654	.2778	4.222	.2963	4.840	6
7	.2407	3.136	.2593	3.630	.2778	4.173	.2963	4.765	.3148	5.407	7
8	.2593	3.654	.2778	4.173	.2963	4.741	.3148	5.358	.3333	6.025	8
9	.2778	4.222	.2963	4.765	.3148	5.358	.3333	6.000	.3519	6.691	9
10	.2963	4.840	.3148	5.407	.3333	6.025	.3519	6.691	.3704	7.407	10
11	.3148	5.506	.3333	6.099	.3519	6.741	.3704	7.432	.3889	8.173	11
12	.3333	6.222	.3519	6.840	.3704	7.506	.3889	8.222	.4074	8.988	12
13	.3519	6.988	.3704	7.630	.3889	8.321	.4074	9.062	.4259	9.852	13
14	.3704	7.802	.3889	8.469	.4074	9.185	.4259	9.951	.4444	10.765	14
15	.3889	8.667	.4074	9.358	.4259	10.099	.4444	10.889	.4630	11.728	15
16	.4074	9.580	.4259	10.296	.4444	11.062	.4630	11.877	.4815	12.741	16
17	.4259	10.543	.4444	11.284	.4630	12.074	.4815	12.914	.5000	13.802	17
18	.4444	11.556	.4630	12.321	.4815	13.136	.5000	14.000	.5185	14.914	18
19	.4630	12.617	.4815	13.407	.5000	14.247	.5185	15.136	.5370	16.074	19
20	.4815	13.728	.5000	14.543	.5185	15.407	.5370	16.321	.5556	17.284	20
21	.5000	14.889	.5185	15.728	.5370	16.617	.5556	17.556	.5741	18.543	21
22	.5185	16.099	.5370	16.963	.5556	17.877	.5741	18.840	.5926	19.852	22
23	.5370	17.358	.5556	18.247	.5741	19.185	.5926	20.173	.6111	21.210	23
24	.5556	18.667	.5741	19.580	.5926	20.543	.6111	21.556	.6296	22.617	24
25	.5741	20.025	.5926	20.963	.6111	21.951	.6296	22.988	.6481	24.074	25
26	.5926	21.432	.6111	22.395	.6296	23.407	.6481	24.469	.6667	25.580	26
27	.6111	22.889	.6296	23.877	.6481	24.914	.6667	26.000	.6852	27.136	27
28	.6296	24.395	.6481	25.407	.6667	26.469	.6852	27.580	.7037	28.741	28
29	.6481	25.951	.6667	26.988	.6852	28.074	.7037	29.210	.7222	30.395	29
30	.6667	27.556	.6852	28.617	.7037	29.728	.7222	30.889	.7407	32.099	30
31	.6852	29.210	.7037	30.296	.7222	31.432	.7407	32.617	.7593	33.852	31
32	.7037	30.914	.7222	32.025	.7407	33.185	.7593	34.395	.7778	35.654	32
33	.7222	32.667	.7407	33.802	.7593	34.988	.7778	36.222	.7963	37.506	33
34	.7407	34.469	.7593	35.630	.7778	36.840	.7963	38.099	.8148	39.407	34
35	.7593	36.321	.7778	37.506	.7963	38.741	.8148	40.025	.8333	41.358	35
36	.7778	38.222	.7963	39.432	.8148	40.691	.8333	42.000	.8519	43.358	36
37	.7963	40.173	.8148	41.407	.8333	42.691	.8519	44.025	.8704	45.407	37
38	.8148	42.173	.8333	43.432	.8519	44.741	.8704	46.099	.8889	47.506	38
39	.8333	44.222	.8519	45.506	.8704	46.840	.8889	48.222	.9074	49.654	39
40	.8519	46.321	.8704	47.630	.8889	48.988	.9074	50.395	.9259	51.852	40
41	.8704	48.469	.8889	49.802	.9074	51.185	.9259	52.617	.9444	54.099	41
42	.8889	50.667	.9074	52.025	.9259	53.432	.9444	54.889	.9630	56.395	42
43	.9074	52.914	.9259	54.296	.9444	55.728	.9630	57.210	.9815	58.741	43
44	.9259	55.210	.9444	56.617	.9630	58.074	.9815	59.580	1.0000	61.136	44
45	.9444	57.556	.9630	58.988	.9815	60.469	1.0000	62.000	1.0185	63.580	45
46	.9630	59.951	.9815	61.407	1.0000	62.914	1.0185	64.469	1.0370	66.074	46
47	.9815	62.395	1.0000	63.877	1.0185	65.407	1.0370	66.988	1.0556	68.617	47
48	1.0000	64.889	1.0185	66.395	1.0370	67.951	1.0556	69.556	1.0741	71.210	48
49	1.0185	67.432	1.0370	68.963	1.0556	70.543	1.0741	72.173	1.0926	73.852	49
50	1.0370	70.025	1.0556	71.580	1.0741	73.185	1.0926	74.840	1.1111	76.543	50
	6		7		8		9		10		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	2.988	.2222	3.556	.2407	4.173	.2593	4.840	.2778	5.556	0
1	.2222	3.284	.2407	3.877	.2593	4.519	.2778	5.210	.2963	5.951	1
2	.2407	3.630	.2593	4.247	.2778	4.914	.2963	5.630	.3148	6.395	2
3	.2593	4.025	.2778	4.667	.2963	5.358	.3148	6.099	.3333	6.889	3
4	.2778	4.469	.2963	5.136	.3148	5.852	.3333	6.617	.3519	7.432	4
5	.2963	4.963	.3148	5.654	.3333	6.395	.3519	7.185	.3704	8.025	5
6	.3148	5.506	.3333	6.222	.3519	6.988	.3704	7.802	.3889	8.667	6
7	.3333	6.099	.3519	6.840	.3704	7.630	.3889	8.469	.4074	9.358	7
8	.3519	6.741	.3704	7.506	.3889	8.321	.4074	9.185	.4259	10.099	8
9	.3704	7.432	.3889	8.222	.4074	9.062	.4259	9.951	.4444	10.889	9
10	.3889	8.173	.4074	8.988	.4259	9.852	.4444	10.765	.4630	11.728	10
11	.4074	8.963	.4259	9.802	.4444	10.691	.4630	11.630	.4815	12.617	11
12	.4259	9.802	.4444	10.667	.4630	11.580	.4815	12.543	.5000	13.556	12
13	.4444	10.691	.4630	11.580	.4815	12.519	.5000	13.506	.5185	14.543	13
14	.4630	11.630	.4815	12.543	.5000	13.506	.5185	14.519	.5370	15.580	14
15	.4815	12.617	.5000	13.556	.5185	14.543	.5370	15.580	.5556	16.667	15
16	.5000	13.654	.5185	14.617	.5370	15.630	.5556	16.691	.5741	17.802	16
17	.5185	14.741	.5370	15.728	.5556	16.765	.5741	17.852	.5926	18.988	17
18	.5370	15.877	.5556	16.889	.5741	17.951	.5926	19.062	.6111	20.222	18
19	.5556	17.062	.5741	18.099	.5926	19.185	.6111	20.321	.6296	21.506	19
20	.5741	18.296	.5926	19.358	.6111	20.469	.6296	21.630	.6481	22.840	20
21	.5926	19.580	.6111	20.667	.6296	21.802	.6481	22.988	.6667	24.222	21
22	.6111	20.914	.6296	22.025	.6481	23.185	.6667	24.395	.6852	25.654	22
23	.6296	22.296	.6481	23.432	.6667	24.617	.6852	25.852	.7037	27.136	23
24	.6481	23.728	.6667	24.889	.6852	26.099	.7037	27.358	.7222	28.667	24
25	.6667	25.210	.6852	26.395	.7037	27.630	.7222	28.914	.7407	30.247	25
26	.6852	26.741	.7037	27.951	.7222	29.210	.7407	30.519	.7593	31.877	26
27	.7037	28.321	.7222	29.556	.7407	30.840	.7593	32.173	.7778	33.556	27
28	.7222	29.951	.7407	31.210	.7593	32.519	.7778	33.877	.7963	35.284	28
29	.7407	31.630	.7593	32.914	.7778	34.247	.7963	35.630	.8148	37.062	29
30	.7593	33.358	.7778	34.667	.7963	36.025	.8148	37.432	.8333	38.889	30
31	.7778	35.136	.7963	36.469	.8148	37.852	.8333	39.284	.8519	40.765	31
32	.7963	36.963	.8148	38.321	.8333	39.728	.8519	41.185	.8704	42.691	32
33	.8148	38.840	.8333	40.222	.8519	41.654	.8704	43.136	.8889	44.667	33
34	.8333	40.765	.8519	42.173	.8704	43.630	.8889	45.136	.9074	46.691	34
35	.8519	42.741	.8704	44.173	.8889	45.654	.9074	47.185	.9259	48.765	35
36	.8704	44.765	.8889	46.222	.9074	47.728	.9259	49.284	.9444	50.889	36
37	.8889	46.840	.9074	48.321	.9259	49.852	.9444	51.432	.9630	53.062	37
38	.9074	48.963	.9259	50.469	.9444	52.025	.9630	53.630	.9815	55.284	38
39	.9259	51.136	.9444	52.667	.9630	54.247	.9815	55.877	1.0000	57.556	39
40	.9444	53.358	.9630	54.914	.9815	56.519	1.0000	58.173	1.0185	59.877	40
41	.9630	55.630	.9815	57.210	1.0000	58.840	1.0185	60.519	1.0370	62.247	41
42	.9815	57.951	1.0000	59.556	1.0185	61.210	1.0370	62.914	1.0556	64.667	42
43	1.0000	60.321	1.0185	61.951	1.0370	63.630	1.0556	65.358	1.0741	67.136	43
44	1.0185	62.741	1.0370	64.395	1.0556	66.099	1.0741	67.852	1.0926	69.654	44
45	1.0370	65.210	1.0556	66.889	1.0741	68.617	1.0926	70.395	1.1111	72.222	45
46	1.0556	67.728	1.0741	69.432	1.0926	71.185	1.1111	72.988	1.1296	74.840	46
47	1.0741	70.296	1.0926	72.025	1.1111	73.802	1.1296	75.630	1.1481	77.506	47
48	1.0926	72.914	1.1111	74.667	1.1296	76.469	1.1481	78.321	1.1667	80.222	48
49	1.1111	75.580	1.1296	77.358	1.1481	79.185	1.1667	81.062	1.1852	82.988	49
50	1.1296	78.296	1.1481	80.099	1.1667	81.951	1.1852	83.852	1.2047	85.802	50
	11		12		13		14		15		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	6.321	.3148	7.136	.3333	8.000	.3519	8.914	.3704	9.877	0
1	.3148	6.741	.3333	7.580	.3519	8.469	.3704	9.407	.3889	10.395	1
2	.3333	7.210	.3519	8.074	.3704	8.988	.3889	9.951	.4074	10.963	2
3	.3519	7.728	.3704	8.617	.3889	9.556	.4074	10.543	.4259	11.580	3
4	.3704	8.296	.3889	9.210	.4074	10.173	.4259	11.185	.4444	12.247	4
5	.3889	8.914	.4074	9.852	.4259	10.840	.4444	11.877	.4630	12.963	5
6	.4074	9.580	.4259	10.543	.4444	11.556	.4630	12.617	.4815	13.728	6
7	.4259	10.296	.4444	11.284	.4630	12.321	.4815	13.407	.5000	14.543	7
8	.4444	11.062	.4630	12.074	.4815	13.136	.5000	14.247	.5185	15.407	8
9	.4630	11.877	.4815	12.914	.5000	14.000	.5185	15.136	.5370	16.321	9
10	.4815	12.741	.5000	13.802	.5185	14.914	.5370	16.074	.5556	17.284	10
11	.5000	13.654	.5185	14.741	.5370	15.877	.5556	17.062	.5741	18.296	11
12	.5185	14.617	.5370	15.728	.5556	16.889	.5741	18.099	.5926	19.358	12
13	.5370	15.630	.5556	16.765	.5741	17.951	.5926	19.185	.6111	20.469	13
14	.5556	16.691	.5741	17.852	.5926	19.062	.6111	20.321	.6296	21.630	14
15	.5741	17.802	.5926	18.988	.6111	20.222	.6296	21.506	.6481	22.840	15
16	.5926	18.963	.6111	20.173	.6296	21.432	.6481	22.741	.6667	24.099	16
17	.6111	20.173	.6296	21.407	.6481	22.691	.6667	24.025	.6852	25.407	17
18	.6296	21.432	.6481	22.691	.6667	24.000	.6852	25.358	.7037	26.765	18
19	.6481	22.741	.6667	24.025	.6852	25.358	.7037	26.741	.7222	28.173	19
20	.6667	24.099	.6852	25.407	.7037	26.765	.7222	28.173	.7407	29.630	20
21	.6852	25.506	.7037	26.840	.7222	28.222	.7407	29.654	.7593	31.136	21
22	.7037	26.963	.7222	28.321	.7407	29.728	.7593	31.185	.7778	32.691	22
23	.7222	28.469	.7407	29.852	.7593	31.284	.7778	32.765	.7963	34.296	23
24	.7407	30.025	.7593	31.432	.7778	32.889	.7963	34.395	.8148	35.951	24
25	.7593	31.630	.7778	33.062	.7963	34.543	.8148	36.074	.8333	37.654	25
26	.7778	33.284	.7963	34.741	.8148	36.247	.8333	37.802	.8519	39.407	26
27	.7963	34.988	.8148	36.469	.8333	38.000	.8519	39.580	.8704	41.210	27
28	.8148	36.741	.8333	38.247	.8519	39.802	.8704	41.407	.8889	43.062	28
29	.8333	38.543	.8519	40.074	.8704	41.654	.8889	43.284	.9074	44.963	29
30	.8519	40.395	.8704	41.951	.8889	43.556	.9074	45.210	.9259	46.914	30
31	.8704	42.296	.8889	43.877	.9074	45.506	.9259	47.185	.9444	48.914	31
32	.8889	44.247	.9074	45.852	.9259	47.506	.9444	49.210	.9630	50.963	32
33	.9074	46.247	.9259	47.877	.9444	49.556	.9630	51.284	.9815	53.062	33
34	.9259	48.296	.9444	49.951	.9630	51.654	.9815	53.407	1.0000	55.210	34
35	.9444	50.395	.9630	52.074	.9815	53.802	1.0000	55.580	1.0185	57.407	35
36	.9630	52.543	.9815	54.247	1.0000	56.000	1.0185	57.802	1.0370	59.654	36
37	.9815	54.741	1.0000	56.469	1.0185	58.247	1.0370	60.074	1.0556	61.951	37
38	1.0000	56.988	1.0185	58.741	1.0370	60.543	1.0556	62.395	1.0741	64.296	38
39	1.0185	59.284	1.0370	61.062	1.0556	62.889	1.0741	64.765	1.0926	66.691	39
40	1.0370	61.630	1.0556	63.432	1.0741	65.284	1.0926	67.185	1.1111	69.136	40
41	1.0556	64.025	1.0741	65.852	1.0926	67.728	1.1111	69.654	1.1296	71.630	41
42	1.0741	66.469	1.0926	68.321	1.1111	70.222	1.1296	72.173	1.1481	74.173	42
43	1.0926	68.963	1.1111	70.840	1.1296	72.765	1.1481	74.741	1.1667	76.765	43
44	1.1111	71.506	1.1296	73.407	1.1481	75.358	1.1667	77.358	1.1852	79.407	44
45	1.1296	74.099	1.1481	76.025	1.1667	78.000	1.1852	80.025	1.2047	82.099	45
46	1.1481	76.741	1.1667	78.691	1.1852	80.691	1.2047	82.741	1.2222	84.840	46
47	1.1667	79.432	1.1852	81.407	1.2047	83.432	1.2222	85.506	1.2407	87.630	47
48	1.1852	82.173	1.2047	84.173	1.2222	86.222	1.2407	88.321	1.2593	90.469	48
49	1.2047	84.963	1.2222	86.988	1.2407	89.062	1.2593	91.185	1.2778	93.358	49
50	1.2222	87.802	1.2407	89.852	1.2593	91.951	1.2778	94.099	1.2963	96.296	50
	16		17		18		19		20		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	10.889	.4074	11.951	.4259	13.062	.4444	14.222	.4630	15.432	0
1	.4074	11.432	.4259	12.519	.4444	13.654	.4630	14.840	.4815	16.074	1
2	.4259	12.025	.4444	13.136	.4630	14.296	.4815	15.506	.5000	16.765	2
3	.4444	12.667	.4630	13.802	.4815	14.988	.5000	16.222	.5185	17.506	3
4	.4630	13.358	.4815	14.519	.5000	15.728	.5185	16.988	.5370	18.296	4
5	.4815	14.099	.5000	15.284	.5185	16.519	.5370	17.802	.5556	19.136	5
6	.5000	14.889	.5185	16.099	.5370	17.358	.5556	18.667	.5741	20.025	6
7	.5185	15.728	.5370	16.963	.5556	18.247	.5741	19.580	.5926	20.963	7
8	.5370	16.617	.5556	17.877	.5741	19.185	.5926	20.543	.6111	21.951	8
9	.5556	17.556	.5741	18.840	.5926	20.173	.6111	21.556	.6296	22.988	9
10	.5741	18.543	.5926	19.852	.6111	21.210	.6296	22.617	.6481	24.074	10
11	.5926	19.580	.6111	20.914	.6296	22.296	.6481	23.728	.6667	25.210	11
12	.6111	20.667	.6296	22.025	.6481	23.432	.6667	24.889	.6852	26.395	12
13	.6296	21.802	.6481	23.185	.6667	24.617	.6852	26.099	.7037	27.630	13
14	.6481	22.988	.6667	24.395	.6852	25.852	.7037	27.358	.7222	28.914	14
15	.6667	24.222	.6852	25.654	.7037	27.136	.7222	28.667	.7407	30.247	15
16	.6852	25.506	.7037	26.963	.7222	28.469	.7407	30.025	.7593	31.630	16
17	.7037	26.840	.7222	28.321	.7407	29.852	.7593	31.432	.7778	33.062	17
18	.7222	28.222	.7407	29.728	.7593	31.284	.7778	32.889	.7963	34.543	18
19	.7407	29.654	.7593	31.185	.7778	32.765	.7963	34.395	.8148	36.074	19
20	.7593	31.136	.7778	32.691	.7963	34.296	.8148	35.951	.8333	37.654	20
21	.7778	32.667	.7963	34.247	.8148	35.877	.8333	37.556	.8519	39.284	21
22	.7963	34.247	.8148	35.852	.8333	37.506	.8519	39.210	.8704	40.963	22
23	.8148	35.877	.8333	37.506	.8519	39.185	.8704	40.914	.8889	42.691	23
24	.8333	37.556	.8519	39.210	.8704	40.914	.8889	42.667	.9074	44.469	24
25	.8519	39.284	.8704	40.963	.8889	42.691	.9074	44.469	.9259	46.296	25
26	.8704	41.062	.8889	42.765	.9074	44.519	.9259	46.321	.9444	48.173	26
27	.8889	42.889	.9074	44.617	.9259	46.395	.9444	48.222	.9630	50.099	27
28	.9074	44.765	.9259	46.519	.9444	48.321	.9630	50.173	.9815	52.074	28
29	.9259	46.691	.9444	48.469	.9630	50.296	.9815	52.173	1.0000	54.099	29
30	.9444	48.667	.9630	50.469	.9815	52.321	1.0000	54.222	1.0185	56.173	30
31	.9630	50.691	.9815	52.519	1.0000	54.395	1.0185	56.321	1.0370	58.296	31
32	.9815	52.765	1.0000	54.617	1.0185	56.519	1.0370	58.469	1.0556	60.469	32
33	1.0000	54.889	1.0185	56.765	1.0370	58.691	1.0556	60.667	1.0741	62.691	33
34	1.0185	57.062	1.0370	58.963	1.0556	60.914	1.0741	62.914	1.0926	64.963	34
35	1.0370	59.284	1.0556	61.210	1.0741	63.185	1.0926	65.210	1.1111	67.284	35
36	1.0556	61.556	1.0741	63.506	1.0926	65.506	1.1111	67.556	1.1296	69.654	36
37	1.0741	63.877	1.0926	65.852	1.1111	67.877	1.1296	69.951	1.1481	72.074	37
38	1.0926	66.247	1.1111	68.247	1.1296	70.296	1.1481	72.395	1.1667	74.543	38
39	1.1111	68.667	1.1296	70.691	1.1481	72.765	1.1667	74.889	1.1852	77.062	39
40	1.1296	71.136	1.1481	73.185	1.1667	75.284	1.1852	77.432	1.2047	79.630	40
41	1.1481	73.654	1.1667	75.728	1.1852	77.852	1.2047	80.025	1.2222	82.247	41
42	1.1667	76.222	1.1852	78.321	1.2047	80.469	1.2222	82.667	1.2407	84.914	42
43	1.1852	78.840	1.2047	80.963	1.2222	83.136	1.2407	85.358	1.2593	87.630	43
44	1.2047	81.506	1.2222	83.654	1.2407	85.852	1.2593	88.099	1.2778	90.395	44
45	1.2222	84.222	1.2407	86.395	1.2593	88.617	1.2778	90.889	1.2963	93.210	45
46	1.2407	86.988	1.2593	89.185	1.2778	91.432	1.2963	93.728	1.3148	96.074	46
47	1.2593	89.802	1.2778	92.025	1.2963	94.296	1.3148	96.617	1.3333	98.988	47
48	1.2778	92.667	1.2963	94.914	1.3148	97.210	1.3333	99.556	1.3519	101.951	48
49	1.2963	95.580	1.3148	97.852	1.3333	100.173	1.3519	102.543	1.3704	104.963	49
50	1.3148	98.543	1.3333	100.840	1.3519	103.185	1.3704	105.580	1.3889	108.025	50
	21		22		23		24		25		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add	Mult.	Add.	Mult.	Add.	
0	.4815	16.691	.5000	18.000	.5185	19.358	.5370	20.765	.5556	22.222	0
1	.5000	17.358	.5185	18.691	.5370	20.074	.5556	21.506	.5741	22.988	1
2	.5185	18.074	.5370	19.432	.5556	20.840	.5741	22.296	.5926	23.802	2
3	.5370	18.840	.5556	20.222	.5741	21.654	.5926	23.136	.6111	24.667	3
4	.5556	19.654	.5741	21.062	.5926	22.519	.6111	24.025	.6296	25.580	4
5	.5741	20.519	.5926	21.951	.6111	23.432	.6296	24.963	.6481	26.543	5
6	.5926	21.432	.6111	22.889	.6296	24.395	.6481	25.951	.6667	27.556	6
7	.6111	22.395	.6296	23.877	.6481	25.407	.6667	26.988	.6852	28.617	7
8	.6296	23.407	.6481	24.914	.6667	26.469	.6852	28.074	.7037	29.728	8
9	.6481	24.469	.6667	26.000	.6852	27.580	.7037	29.210	.7222	30.889	9
10	.6667	25.580	.6852	27.136	.7037	28.741	.7222	30.395	.7407	32.099	10
11	.6852	26.741	.7037	28.321	.7222	29.951	.7407	31.630	.7593	33.358	11
12	.7037	27.951	.7222	29.556	.7407	31.210	.7593	32.914	.7778	34.667	12
13	.7222	29.210	.7407	30.840	.7593	32.519	.7778	34.247	.7963	36.025	13
14	.7407	30.519	.7593	32.173	.7778	33.877	.7963	35.630	.8148	37.432	14
15	.7593	31.877	.7778	33.556	.7963	35.284	.8148	37.062	.8333	38.889	15
16	.7778	33.284	.7963	34.988	.8148	36.741	.8333	38.543	.8519	40.395	16
17	.7963	34.741	.8148	36.469	.8333	38.247	.8519	40.074	.8704	41.951	17
18	.8148	36.247	.8333	38.000	.8519	39.802	.8704	41.654	.8889	43.556	18
19	.8333	37.802	.8519	39.580	.8704	41.407	.8889	43.284	.9074	45.210	19
20	.8519	39.407	.8704	41.210	.8889	43.062	.9074	44.963	.9259	46.914	20
21	.8704	41.062	.8889	42.889	.9074	44.765	.9259	46.691	.9444	48.667	21
22	.8889	42.765	.9074	44.617	.9259	46.519	.9444	48.469	.9630	50.469	22
23	.9074	44.519	.9259	46.395	.9444	48.321	.9630	50.296	.9815	52.321	23
24	.9259	46.321	.9444	48.222	.9630	50.173	.9815	52.173	1.0000	54.222	24
25	.9444	48.173	.9630	50.099	.9815	52.074	1.0000	54.099	1.0185	56.173	25
26	.9630	50.074	.9815	52.025	1.0000	54.025	1.0185	56.074	1.0370	58.173	26
27	.9815	52.025	1.0000	54.000	1.0185	56.025	1.0370	58.099	1.0556	60.222	27
28	1.0000	54.025	1.0185	56.025	1.0370	58.074	1.0556	60.173	1.0741	62.321	28
29	1.0185	56.074	1.0370	58.099	1.0556	60.173	1.0741	62.296	1.0926	64.469	29
30	1.0370	58.173	1.0556	60.222	1.0741	62.321	1.0926	64.469	1.1111	66.667	30
31	1.0556	60.321	1.0741	62.395	1.0926	64.519	1.1111	66.691	1.1296	68.914	31
32	1.0741	62.519	1.0926	64.617	1.1111	66.765	1.1296	68.963	1.1481	71.210	32
33	1.0926	64.765	1.1111	66.889	1.1296	69.062	1.1481	71.284	1.1667	73.556	33
34	1.1111	67.062	1.1296	69.210	1.1481	71.407	1.1667	73.654	1.1852	75.951	34
35	1.1296	69.407	1.1481	71.580	1.1667	73.802	1.1852	76.074	1.2047	78.395	35
36	1.1481	71.802	1.1667	74.000	1.1852	76.247	1.2047	78.543	1.2222	80.889	36
37	1.1667	74.247	1.1852	76.469	1.2047	78.741	1.2222	81.062	1.2407	83.432	37
38	1.1852	76.741	1.2047	78.988	1.2222	81.284	1.2407	83.630	1.2593	86.025	38
39	1.2047	79.284	1.2222	81.556	1.2407	83.877	1.2593	86.247	1.2778	88.667	39
40	1.2222	81.877	1.2407	84.173	1.2593	86.519	1.2778	88.914	1.2963	91.358	40
41	1.2407	84.519	1.2593	86.840	1.2778	89.210	1.2963	91.630	1.3148	94.099	41
42	1.2593	87.210	1.2778	89.556	1.2963	91.951	1.3148	94.395	1.3333	96.889	42
43	1.2778	89.951	1.2963	92.321	1.3148	94.741	1.3333	97.210	1.3519	99.728	43
44	1.2963	92.741	1.3148	95.136	1.3333	97.580	1.3519	100.074	1.3704	102.617	44
45	1.3148	95.580	1.3333	98.000	1.3519	100.469	1.3704	102.988	1.3889	105.556	45
46	1.3333	98.469	1.3519	100.914	1.3704	103.407	1.3889	105.951	1.4074	108.543	46
47	1.3519	101.407	1.3704	103.877	1.3889	106.395	1.4074	108.963	1.4259	111.580	47
48	1.3704	104.395	1.3889	106.889	1.4074	109.432	1.4259	112.025	1.4444	114.667	48
49	1.3889	107.432	1.4074	109.951	1.4259	112.519	1.4444	115.136	1.4630	117.802	59
50	1.4074	110.519	1.4259	113.062	1.4444	115.654	1.4630	118.296	1.4815	120.988	50
	26		27		28		29		30		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	23.728	.5926	25.284	.6111	26.889	.6296	28.543	.6481	30.247	0
1	.5926	24.519	.6111	26.099	.6296	27.728	.6481	29.407	.6667	31.136	1
2	.6111	25.358	.6296	26.963	.6481	28.617	.6667	30.321	.6852	32.074	2
3	.6296	26.247	.6481	27.877	.6667	29.556	.6852	31.284	.7037	33.062	3
4	.6481	27.185	.6667	28.840	.6852	30.543	.7037	32.296	.7222	34.099	4
5	.6667	28.173	.6852	29.852	.7037	31.580	.7222	33.358	.7407	35.185	5
6	.6852	29.210	.7037	30.914	.7222	32.667	.7407	34.469	.7593	36.321	6
7	.7037	30.296	.7222	32.025	.7407	33.802	.7593	35.630	.7778	37.506	7
8	.7222	31.432	.7407	33.185	.7593	34.988	.7778	36.840	.7963	38.741	8
9	.7407	32.617	.7593	34.395	.7778	36.222	.7963	38.099	.8148	40.025	9
10	.7593	33.852	.7778	35.654	.7963	37.506	.8148	39.407	.8333	41.358	10
11	.7778	35.136	.7963	36.963	.8148	38.840	.8333	40.765	.8519	42.741	11
12	.7963	36.469	.8148	38.321	.8333	40.222	.8519	42.173	.8704	44.173	12
13	.8148	37.852	.8333	39.728	.8519	41.654	.8704	43.630	.8889	45.654	13
14	.8333	39.284	.8519	41.185	.8704	43.136	.8889	45.136	.9074	47.185	14
15	.8519	40.765	.8704	42.691	.8889	44.667	.9074	46.691	.9259	48.765	15
16	.8704	42.296	.8889	44.247	.9074	46.247	.9259	48.296	.9444	50.395	16
17	.8889	43.877	.9074	45.852	.9259	47.877	.9444	49.951	.9630	52.074	17
18	.9074	45.506	.9259	47.506	.9444	49.556	.9630	51.654	.9815	53.802	18
19	.9259	47.185	.9444	49.210	.9630	51.284	.9815	53.407	1.0000	55.580	19
20	.9444	48.914	.9630	50.963	.9815	53.062	1.0000	55.210	1.0185	57.407	20
21	.9630	50.691	.9815	52.765	1.0000	54.889	1.0185	57.062	1.0370	59.284	21
22	.9815	52.519	1.0000	54.617	1.0185	56.765	1.0370	58.963	1.0556	61.210	22
23	1.0000	54.395	1.0185	56.519	1.0370	58.691	1.0556	60.914	1.0741	63.185	23
24	1.0185	56.321	1.0370	58.469	1.0556	60.667	1.0741	62.914	1.0926	65.210	24
25	1.0370	58.296	1.0556	60.469	1.0741	62.691	1.0926	64.963	1.1111	67.284	25
26	1.0556	60.321	1.0741	62.519	1.0926	64.765	1.1111	67.062	1.1296	69.407	26
27	1.0741	62.395	1.0926	64.617	1.1111	66.889	1.1296	69.210	1.1481	71.580	27
28	1.0926	64.519	1.1111	66.765	1.1296	69.062	1.1481	71.407	1.1667	73.802	28
29	1.1111	66.691	1.1296	68.963	1.1481	71.284	1.1667	73.654	1.1852	76.074	29
30	1.1296	68.914	1.1481	71.210	1.1667	73.556	1.1852	75.951	1.2047	78.395	30
31	1.1481	71.185	1.1667	73.506	1.1852	75.877	1.2047	78.296	1.2222	80.765	31
32	1.1667	73.506	1.1852	75.852	1.2047	78.247	1.2222	80.691	1.2407	83.185	32
33	1.1852	75.877	1.2047	78.247	1.2222	80.667	1.2407	83.136	1.2593	85.654	33
34	1.2047	78.296	1.2222	80.691	1.2407	83.136	1.2593	85.630	1.2778	88.173	34
35	1.2222	80.765	1.2407	83.185	1.2593	85.654	1.2778	88.173	1.2963	90.741	35
36	1.2407	83.284	1.2593	85.728	1.2778	88.222	1.2963	90.765	1.3148	93.358	36
37	1.2593	85.852	1.2778	88.321	1.2963	90.840	1.3148	93.407	1.3333	96.025	37
38	1.2778	88.469	1.2963	90.963	1.3148	93.506	1.3333	96.099	1.3519	98.741	38
39	1.2963	91.136	1.3148	93.654	1.3333	96.222	1.3519	98.840	1.3704	101.506	39
40	1.3148	93.852	1.3333	96.395	1.3519	98.988	1.3704	101.630	1.3889	104.321	40
41	1.3333	96.617	1.3519	99.185	1.3704	101.802	1.3889	104.469	1.4074	107.185	41
42	1.3519	99.432	1.3704	102.025	1.3889	104.667	1.4074	107.358	1.4259	110.099	42
43	1.3704	102.296	1.3889	104.914	1.4074	107.580	1.4259	110.296	1.4444	113.062	43
44	1.3889	105.210	1.4074	107.852	1.4259	110.543	1.4444	113.284	1.4630	116.074	44
45	1.4074	108.173	1.4259	110.840	1.4444	113.556	1.4630	116.321	1.4815	119.136	45
46	1.4259	111.185	1.4444	113.877	1.4630	116.617	1.4815	119.407	1.5000	122.247	46
47	1.4444	114.247	1.4630	116.963	1.4815	119.728	1.5000	122.543	1.5185	125.407	47
48	1.4630	117.358	1.4815	120.099	1.5000	122.889	1.5185	125.728	1.5370	128.617	48
49	1.4815	120.519	1.5000	123.284	1.5185	126.099	1.5370	128.963	1.5556	131.877	49
50	1.5000	123.728	1.5185	126.519	1.5370	129.358	1.5556	132.247	1.5741	135.185	50
	31		32		33		34		35		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Perp.	36		37		38		39		40		Perp.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	32.000	.6852	33.802	.7037	35.654	.7222	37.556	.7407	39.506	0
1	.6852	32.914	.7037	34.741	.7222	36.617	.7407	38.543	.7593	40.519	1
2	.7037	33.877	.7222	35.728	.7407	37.630	.7593	39.580	.7778	41.580	2
3	.7222	34.889	.7407	36.765	.7593	38.691	.7778	40.667	.7963	42.691	3
4	.7407	35.951	.7593	37.852	.7778	39.802	.7963	41.802	.8148	43.852	4
5	.7593	37.062	.7778	38.988	.7963	40.963	.8148	42.988	.8333	45.062	5
6	.7778	38.222	.7963	40.173	.8148	42.173	.8333	44.222	.8519	46.321	6
7	.7963	39.432	.8148	41.407	.8333	43.432	.8519	45.506	.8704	47.630	7
8	.8148	40.691	.8333	42.691	.8519	44.741	.8704	46.840	.8889	48.988	8
9	.8333	42.000	.8519	44.025	.8704	46.099	.8889	48.222	.9074	50.395	9
10	.8519	43.358	.8704	45.407	.8889	47.506	.9074	49.654	.9259	51.852	10
11	.8704	44.765	.8889	46.840	.9074	48.963	.9259	51.136	.9444	53.358	11
12	.8889	46.222	.9074	48.321	.9259	50.469	.9444	52.667	.9630	54.914	12
13	.9074	47.728	.9259	49.852	.9444	52.025	.9630	54.247	.9815	56.519	13
14	.9259	49.284	.9444	51.432	.9630	53.630	.9815	55.877	1.0000	58.173	14
15	.9444	50.889	.9630	53.062	.9815	55.284	1.0000	57.556	1.0185	59.877	15
16	.9630	52.543	.9815	54.741	1.0000	56.988	1.0185	59.284	1.0370	61.630	16
17	.9815	54.247	1.0000	56.469	1.0185	58.741	1.0370	61.062	1.0556	63.432	17
18	1.0000	56.000	1.0185	58.247	1.0370	60.543	1.0556	62.889	1.0741	65.284	18
19	1.0185	57.802	1.0370	60.074	1.0556	62.395	1.0741	64.765	1.0926	67.185	19
20	1.0370	59.654	1.0556	61.951	1.0741	64.296	1.0926	66.691	1.1111	69.136	20
21	1.0556	61.556	1.0741	63.877	1.0926	66.247	1.1111	68.667	1.1296	71.136	21
22	1.0741	63.506	1.0926	65.852	1.1111	68.247	1.1296	70.691	1.1481	73.185	22
23	1.0926	65.506	1.1111	67.877	1.1296	70.296	1.1481	72.765	1.1667	75.284	23
24	1.1111	67.556	1.1296	69.951	1.1481	72.395	1.1667	74.889	1.1852	77.432	24
25	1.1296	69.654	1.1481	72.074	1.1667	74.543	1.1852	77.062	1.2047	79.630	25
26	1.1481	71.802	1.1667	74.247	1.1852	76.741	1.2047	79.284	1.2222	81.877	26
27	1.1667	74.000	1.1852	76.469	1.2047	78.988	1.2222	81.556	1.2407	84.173	27
28	1.1852	76.247	1.2047	78.741	1.2222	81.284	1.2407	83.877	1.2593	86.519	28
29	1.2047	78.543	1.2222	81.062	1.2407	83.630	1.2593	86.247	1.2778	88.914	29
30	1.2222	80.889	1.2407	83.432	1.2593	86.025	1.2778	88.667	1.2963	91.358	30
31	1.2407	83.284	1.2593	85.852	1.2778	88.469	1.2963	91.136	1.3148	93.852	31
32	1.2593	85.728	1.2778	88.321	1.2963	90.963	1.3148	93.654	1.3333	96.395	32
33	1.2778	88.222	1.2963	90.840	1.3148	93.506	1.3335	96.222	1.3519	98.988	33
34	1.2963	90.765	1.3143	93.407	1.3333	96.099	1.3519	98.840	1.3704	101.630	34
35	1.3148	93.358	1.3333	96.025	1.3519	98.741	1.3704	101.506	1.3889	104.321	35
36	1.3333	96.000	1.3519	98.691	1.3704	101.432	1.3889	104.222	1.4074	107.062	36
37	1.3519	98.691	1.3704	101.407	1.3889	104.173	1.4074	106.988	1.4259	109.852	37
38	1.3704	101.432	1.3889	104.173	1.4074	106.963	1.4259	109.802	1.4444	112.691	38
39	1.3889	104.222	1.4074	106.988	1.4259	109.802	1.4444	112.667	1.4630	115.580	39
40	1.4074	107.062	1.4259	109.852	1.4444	112.691	1.4630	115.580	1.4815	118.519	40
41	1.4259	109.951	1.4444	112.765	1.4630	115.630	1.4815	118.543	1.5000	121.506	41
42	1.4444	112.889	1.4630	115.728	1.4815	118.617	1.5000	121.556	1.5185	124.543	42
43	1.4630	115.877	1.4815	118.741	1.5000	121.654	1.5185	124.617	1.5370	127.630	43
44	1.4815	118.914	1.5000	121.802	1.5185	124.741	1.5370	127.728	1.5556	130.765	44
45	1.5000	122.000	1.5185	124.914	1.5370	127.877	1.5556	130.889	1.5741	133.951	45
46	1.5185	125.136	1.5370	128.074	1.5556	131.062	1.5741	134.099	1.5926	137.185	46
47	1.5370	128.321	1.5556	131.284	1.5741	134.296	1.5926	137.358	1.6111	140.469	47
48	1.5556	131.556	1.5741	134.543	1.5926	137.580	1.6111	140.667	1.6296	143.802	48
49	1.5741	134.840	1.5926	137.852	1.6111	140.914	1.6296	144.025	1.6481	147.185	49
50	1.5926	138.173	1.6111	141.210	1.6296	144.296	1.6481	147.432	1.6667	150.617	50
	36		37		38		39		40		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	41.506	.7778	43.556	.7963	45.654	.8148	47.802	.8333	50.000	0
1	.7778	42.543	.7963	44.617	.8148	46.741	.8333	48.914	.8519	51.136	1
2	.7963	43.630	.8148	45.728	.8333	47.877	.8519	50.074	.8704	52.321	2
3	.8148	44.765	.8333	46.889	.8519	49.062	.8704	51.284	.8889	53.556	3
4	.8333	45.951	.8519	48.099	.8704	50.296	.8889	52.543	.9074	54.840	4
5	.8519	47.185	.8704	49.358	.8889	51.580	.9074	53.852	.9259	56.173	5
6	.8704	48.469	.8889	50.667	.9074	52.914	.9259	55.210	.9444	57.556	6
7	.8889	49.802	.9074	52.025	.9259	54.296	.9444	56.617	.9630	58.988	7
8	.9074	51.185	.9259	53.432	.9444	55.728	.9630	58.074	.9815	60.469	8
9	.9259	52.617	.9444	54.889	.9630	57.210	.9815	59.580	1.0000	62.000	9
10	.9444	54.099	.9630	56.395	.9815	58.741	1.0000	61.136	1.0185	63.580	10
11	.9630	55.630	.9815	57.951	1.0000	60.321	1.0185	62.741	1.0370	65.210	11
12	.9815	57.210	1.0000	59.556	1.0185	61.951	1.0370	64.395	1.0556	66.889	12
13	1.0000	58.840	1.0185	61.210	1.0370	63.630	1.0556	66.099	1.0741	68.617	13
14	1.0185	60.519	1.0370	62.914	1.0556	65.358	1.0741	67.852	1.0926	70.395	14
15	1.0370	62.247	1.0556	64.667	1.0741	67.136	1.0926	69.654	1.1111	72.222	15
16	1.0556	64.025	1.0741	66.469	1.0926	68.963	1.1111	71.506	1.1296	74.099	16
17	1.0741	65.852	1.0926	68.321	1.1111	70.840	1.1296	73.407	1.1481	76.025	17
18	1.0926	67.728	1.1111	70.222	1.1296	72.765	1.1481	75.358	1.1667	78.000	18
19	1.1111	69.654	1.1296	72.173	1.1481	74.741	1.1667	77.358	1.1852	80.025	19
20	1.1296	71.630	1.1481	74.173	1.1667	76.765	1.1852	79.407	1.2047	82.099	20
21	1.1481	73.654	1.1667	76.222	1.1852	78.840	1.2047	81.506	1.2222	84.222	21
22	1.1667	75.728	1.1852	78.321	1.2047	80.963	1.2222	83.654	1.2407	86.395	22
23	1.1852	77.852	1.2047	80.469	1.2222	83.136	1.2407	85.852	1.2593	88.617	23
24	1.2047	80.025	1.2222	82.667	1.2407	85.358	1.2593	88.099	1.2778	90.889	24
25	1.2222	82.247	1.2407	84.914	1.2593	87.630	1.2778	90.395	1.2965	93.210	25
26	1.2407	84.519	1.2593	87.210	1.2778	89.951	1.2963	92.741	1.3148	95.580	26
27	1.2593	86.840	1.2778	89.556	1.2963	92.321	1.3148	95.136	1.3333	98.000	27
28	1.2778	89.210	1.2963	91.951	1.3148	94.741	1.3333	97.580	1.3519	100.469	28
29	1.2963	91.630	1.3148	94.395	1.3333	97.210	1.3519	100.074	1.3704	102.988	29
30	1.3148	94.099	1.3333	96.889	1.3519	99.728	1.3704	102.617	1.3889	105.556	30
31	1.3333	96.617	1.3519	99.432	1.3704	102.296	1.3889	105.210	1.4074	108.173	31
32	1.3519	99.185	1.3704	102.025	1.3889	104.914	1.4074	107.852	1.4259	110.840	32
33	1.3704	101.802	1.3889	104.667	1.4074	107.580	1.4259	110.543	1.4444	113.556	33
34	1.3889	104.469	1.4074	107.358	1.4259	110.296	1.4444	113.284	1.4630	116.321	34
35	1.4074	107.185	1.4259	110.099	1.4444	113.062	1.4630	116.074	1.4815	119.136	35
36	1.4259	109.951	1.4444	112.889	1.4630	115.877	1.4815	118.914	1.5000	122.000	36
37	1.4444	112.765	1.4630	115.728	1.4815	118.741	1.5000	121.802	1.5185	124.914	37
38	1.4630	115.630	1.4815	118.617	1.5000	121.654	1.5185	124.741	1.5370	127.877	38
39	1.4815	118.543	1.5000	121.556	1.5185	124.617	1.5370	127.728	1.5556	130.889	39
40	1.5000	121.506	1.5185	124.543	1.5370	127.630	1.5556	130.765	1.5741	133.951	40
41	1.5185	124.519	1.5370	127.580	1.5556	130.691	1.5741	133.852	1.5926	137.062	41
42	1.5370	127.580	1.5556	130.667	1.5741	133.802	1.5926	136.988	1.6111	140.222	42
43	1.5556	130.691	1.5741	133.802	1.5926	136.963	1.6111	140.173	1.6296	143.432	43
44	1.5741	133.852	1.5926	136.988	1.6111	140.173	1.6296	143.407	1.6481	146.691	44
45	1.5926	137.062	1.6111	140.222	1.6296	143.432	1.6481	146.691	1.6667	150.000	45
46	1.6111	140.321	1.6296	143.506	1.6481	146.741	1.6667	150.025	1.6852	153.358	46
47	1.6296	143.630	1.6481	146.840	1.6667	150.099	1.6852	153.407	1.7037	156.765	47
48	1.6481	146.988	1.6667	150.222	1.6852	153.506	1.7037	156.840	1.7222	160.222	48
49	1.6667	150.395	1.6852	153.654	1.7037	156.963	1.7222	160.321	1.7407	163.728	49
50	1.6852	153.852	1.7037	157.136	1.7222	160.469	1.7407	163.852	1.7593	167.284	50
	41		42		43		44		45		

TABLE XXIX.—BASE 1—SLOPES 2 to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	52.247	.8704	54.543	.8889	56.889	.9074	59.284	.9259	61.728	0
1	.8704	53.407	.8889	55.728	.9074	58.099	.9259	60.519	.9444	62.988	1
2	.8889	54.617	.9074	56.963	.9259	59.358	.9444	61.802	.9630	64.296	2
3	.9074	55.877	.9259	58.247	.9444	60.667	.9630	63.136	.9815	65.654	3
4	.9259	57.185	.9444	59.580	.9630	62.025	.9815	64.519	1.0000	67.062	4
5	.9444	58.543	.9630	60.963	.9815	63.432	1.0000	65.951	1.0185	68.519	5
6	.9630	59.951	.9815	62.395	1.0000	64.889	1.0185	67.432	1.0370	70.025	6
7	.9815	61.407	1.0000	63.877	1.0185	66.395	1.0370	68.963	1.0556	71.580	7
8	1.0000	62.914	1.0185	65.407	1.0370	67.951	1.0556	70.543	1.0741	73.185	8
9	1.0185	64.469	1.0370	66.988	1.0556	69.556	1.0741	72.173	1.0926	74.840	9
10	1.0370	66.074	1.0556	68.617	1.0741	71.210	1.0926	73.852	1.1111	76.543	10
11	1.0556	67.728	1.0741	70.296	1.0926	72.914	1.1111	75.580	1.1296	78.296	11
12	1.0741	69.432	1.0926	72.025	1.1111	74.667	1.1296	77.358	1.1481	80.099	12
13	1.0926	71.185	1.1111	73.802	1.1296	76.469	1.1481	79.185	1.1667	81.951	13
14	1.1111	72.988	1.1296	75.630	1.1481	78.321	1.1667	81.062	1.1852	83.852	14
15	1.1296	74.840	1.1481	77.506	1.1667	80.222	1.1852	82.988	1.2047	85.802	15
16	1.1481	76.741	1.1667	79.432	1.1852	82.173	1.2047	84.963	1.2222	87.802	16
17	1.1667	78.691	1.1852	81.407	1.2047	84.173	1.2222	86.988	1.2407	89.852	17
18	1.1852	80.691	1.2047	83.432	1.2222	86.222	1.2407	89.062	1.2593	91.951	18
19	1.2047	82.741	1.2222	85.506	1.2407	88.321	1.2593	91.185	1.2778	94.099	19
20	1.2222	84.840	1.2407	87.630	1.2593	90.469	1.2778	93.358	1.2963	96.296	20
21	1.2407	86.988	1.2593	89.802	1.2778	92.667	1.2963	95.580	1.3148	98.543	21
22	1.2593	89.185	1.2778	92.025	1.2963	94.914	1.3148	97.852	1.3333	100.840	22
23	1.2778	91.432	1.2963	94.296	1.3148	97.210	1.3333	100.173	1.3519	103.185	23
24	1.2963	93.728	1.3148	96.617	1.3333	99.556	1.3519	102.543	1.3704	105.580	24
25	1.3148	96.074	1.3333	98.988	1.3519	101.951	1.3704	104.963	1.3889	108.025	25
26	1.3333	98.469	1.3519	101.407	1.3704	104.395	1.3889	107.432	1.4074	110.519	26
27	1.3519	100.914	1.3704	103.877	1.3889	106.889	1.4074	109.951	1.4259	113.062	27
28	1.3704	103.407	1.3889	106.395	1.4074	109.432	1.4259	112.519	1.4444	115.654	28
29	1.3889	105.951	1.4074	108.963	1.4259	112.025	1.4444	115.136	1.4630	118.296	29
30	1.4074	108.543	1.4259	111.580	1.4444	114.667	1.4630	117.802	1.4815	120.988	30
31	1.4259	111.185	1.4444	114.247	1.4630	117.358	1.4815	120.519	1.5000	123.728	31
32	1.4444	113.877	1.4630	116.963	1.4815	120.099	1.5000	123.284	1.5185	126.519	32
33	1.4630	116.617	1.4815	119.728	1.5000	122.889	1.5185	126.099	1.5370	129.358	33
34	1.4815	119.407	1.5000	122.543	1.5185	125.728	1.5370	128.963	1.5556	132.247	34
35	1.5000	122.247	1.5185	125.407	1.5370	128.617	1.5556	131.877	1.5741	135.185	35
36	1.5185	125.136	1.5370	128.321	1.5556	131.556	1.5741	134.840	1.5926	138.173	36
37	1.5370	128.074	1.5556	131.284	1.5741	134.543	1.5926	137.852	1.6111	141.210	37
38	1.5556	131.062	1.5741	134.296	1.5926	137.580	1.6111	140.914	1.6296	144.296	38
39	1.5741	134.099	1.5926	137.358	1.6111	140.667	1.6296	144.025	1.6481	147.432	39
40	1.5926	137.185	1.6111	140.469	1.6296	143.802	1.6481	147.185	1.6667	150.617	40
41	1.6111	140.321	1.6296	143.630	1.6481	146.988	1.6667	150.395	1.6852	153.852	41
42	1.6296	143.506	1.6481	146.840	1.6667	150.222	1.6852	153.654	1.7037	157.136	42
43	1.6481	146.741	1.6667	150.099	1.6852	153.506	1.7037	156.963	1.7222	160.469	43
44	1.6667	150.025	1.6852	153.407	1.7037	156.840	1.7222	160.321	1.7407	163.852	44
45	1.6852	153.358	1.7037	156.765	1.7222	160.222	1.7407	163.728	1.7593	167.284	45
46	1.7037	156.741	1.7222	160.173	1.7407	163.654	1.7593	167.185	1.7778	170.765	46
47	1.7222	160.173	1.7407	163.630	1.7593	167.136	1.7778	170.691	1.7963	174.296	47
48	1.7407	163.654	1.7593	167.136	1.7778	170.667	1.7963	174.247	1.8148	177.877	48
49	1.7593	167.185	1.7778	170.691	1.7963	174.247	1.8148	177.852	1.8333	181.506	49
50	1.7778	170.765	1.7963	174.296	1.8148	177.877	1.8333	181.506	1.8519	185.185	50
	46		47		48		49		50		

TABLE XXX.—BASE 1—SLOPES $2\frac{1}{4}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.028	.0370	0.111	.0556	0.250	.0741	0.444	.0926	0.694	0
1	.0370	0.083	.0556	0.194	.0741	0.361	.0926	0.583	.1111	0.861	1
2	.0556	0.194	.0741	0.333	.0926	0.528	.1111	0.778	.1296	1.083	2
3	.0741	0.361	.0926	0.528	.1111	0.750	.1296	1.028	.1481	1.361	3
4	.0926	0.583	.1111	0.778	.1296	1.028	.1481	1.333	.1667	1.694	4
5	.1111	0.861	.1296	1.083	.1481	1.361	.1667	1.694	.1852	2.083	5
6	.1296	1.194	.1481	1.444	.1667	1.750	.1852	2.111	.2047	2.528	6
7	.1481	1.583	.1667	1.861	.1852	2.194	.2047	2.583	.2222	3.028	7
8	.1667	2.028	.1852	2.333	.2047	2.694	.2222	3.111	.2407	3.583	8
9	.1852	2.528	.2047	2.861	.2222	3.250	.2407	3.694	.2593	4.194	9
10	.2047	3.083	.2222	3.444	.2407	3.861	.2593	4.333	.2778	4.861	10
11	.2222	3.694	.2407	4.083	.2593	4.528	.2778	5.028	.2963	5.583	11
12	.2407	4.361	.2593	4.778	.2778	5.250	.2963	5.778	.3148	6.361	12
13	.2593	5.083	.2778	5.528	.2963	6.028	.3148	6.583	.3333	7.194	13
14	.2778	5.861	.2963	6.333	.3148	6.861	.3333	7.444	.3519	8.083	14
15	.2963	6.694	.3148	7.194	.3333	7.750	.3519	8.361	.3704	9.028	15
16	.3148	7.583	.3333	8.111	.3519	8.694	.3704	9.333	.3889	10.028	16
17	.3333	8.528	.3519	9.083	.3704	9.694	.3889	10.361	.4074	11.083	17
18	.3519	9.528	.3704	10.111	.3889	10.750	.4074	11.444	.4259	12.194	18
19	.3704	10.583	.3889	11.194	.4074	11.861	.4259	12.583	.4444	13.361	19
20	.3889	11.694	.4074	12.333	.4259	13.028	.4444	13.778	.4630	14.583	20
21	.4074	12.861	.4259	13.528	.4444	14.250	.4630	15.028	.4815	15.861	21
22	.4259	14.083	.4444	14.778	.4630	15.528	.4815	16.333	.5000	17.194	22
23	.4444	15.361	.4630	16.083	.4815	16.861	.5000	17.694	.5185	18.583	23
24	.4630	16.694	.4815	17.444	.5000	18.250	.5185	19.111	.5370	20.028	24
25	.4815	18.083	.5000	18.861	.5185	19.694	.5370	20.583	.5556	21.528	25
26	.5000	19.528	.5185	20.333	.5370	21.194	.5556	22.111	.5741	23.083	26
27	.5185	21.028	.5370	21.861	.5556	22.750	.5741	23.694	.5926	24.694	27
28	.5370	22.583	.5556	23.444	.5741	24.361	.5926	25.333	.6111	26.361	28
29	.5556	24.194	.5741	25.083	.5926	26.028	.6111	27.028	.6296	28.083	29
30	.5741	25.861	.5926	26.778	.6111	27.750	.6296	28.778	.6481	29.861	30
31	.5926	27.583	.6111	28.528	.6296	29.528	.6481	30.583	.6667	31.694	31
32	.6111	29.361	.6296	30.333	.6481	31.361	.6667	32.444	.6852	33.583	32
33	.6296	31.194	.6481	32.194	.6667	33.250	.6852	34.361	.7037	35.528	33
34	.6481	33.083	.6667	34.111	.6852	35.194	.7037	36.333	.7222	37.528	34
35	.6667	35.028	.6852	36.083	.7037	37.194	.7222	38.361	.7407	39.583	35
36	.6852	37.028	.7037	38.111	.7222	39.250	.7407	40.444	.7593	41.694	36
37	.7037	39.083	.7222	40.194	.7407	41.361	.7593	42.583	.7778	43.861	37
38	.7222	41.194	.7407	42.333	.7593	43.528	.7778	44.778	.7963	46.083	38
39	.7407	43.361	.7593	44.528	.7778	45.750	.7963	47.028	.8148	48.361	39
40	.7593	45.583	.7778	46.778	.7963	48.028	.8148	49.333	.8333	50.694	40
41	.7778	47.861	.7963	49.083	.8148	50.361	.8333	51.694	.8519	53.083	41
42	.7963	50.194	.8148	51.444	.8333	52.750	.8519	54.111	.8704	55.528	42
43	.8148	52.583	.8333	53.861	.8519	55.194	.8704	56.583	.8889	58.028	43
44	.8333	55.028	.8519	56.333	.8704	57.694	.8889	59.111	.9074	60.583	44
45	.8519	57.528	.8704	58.861	.8889	60.250	.9074	61.694	.9259	63.194	45
46	.8704	60.083	.8889	61.444	.9074	62.861	.9259	64.333	.9444	65.861	46
47	.8889	62.694	.9074	64.083	.9259	65.528	.9444	67.028	.9630	68.583	47
48	.9074	65.361	.9259	66.778	.9444	68.250	.9630	69.778	.9815	71.361	48
49	.9259	68.083	.9444	69.528	.9630	71.028	.9815	72.583	1.0000	74.194	49
50	.9444	70.861	.9630	72.333	.9815	73.861	1.0000	75.444	1.0185	77.083	50
	1		2		3		4		5		

TABLE XXX.—BASE 1—SLOPES 2½ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	1.000	.1296	1.361	.1481	1.778	.1667	2.250	.1852	2.778	0
1	.1296	1.194	.1481	1.583	.1667	2.028	.1852	2.528	.2047	3.083	1
2	.1481	1.444	.1667	1.861	.1852	2.333	.2047	2.861	.2222	3.444	2
3	.1667	1.750	.1852	2.194	.2047	2.694	.2222	3.250	.2407	3.861	3
4	.1852	2.111	.2047	2.583	.2222	3.111	.2407	3.694	.2593	4.333	4
5	.2047	2.528	.2222	3.028	.2407	3.583	.2593	4.194	.2778	4.861	5
6	.2222	3.000	.2407	3.528	.2593	4.111	.2778	4.750	.2963	5.444	6
7	.2407	3.528	.2593	4.083	.2778	4.694	.2963	5.361	.3148	6.083	7
8	.2593	4.111	.2778	4.694	.2963	5.333	.3148	6.028	.3333	6.778	8
9	.2778	4.750	.2963	5.361	.3148	6.028	.3333	6.750	.3519	7.528	9
10	.2963	5.444	.3148	6.083	.3333	6.778	.3519	7.528	.3704	8.333	10
11	.3148	6.194	.3333	6.861	.3519	7.583	.3704	8.361	.3889	9.194	11
12	.3333	7.000	.3519	7.694	.3704	8.444	.3889	9.250	.4074	10.111	12
13	.3519	7.861	.3704	8.583	.3889	9.361	.4074	10.194	.4259	11.083	13
14	.3704	8.778	.3889	9.528	.4074	10.333	.4259	11.194	.4444	12.111	14
15	.3889	9.750	.4074	10.528	.4259	11.361	.4444	12.250	.4630	13.194	15
16	.4074	10.778	.4259	11.583	.4444	12.444	.4630	13.361	.4815	14.333	16
17	.4259	11.861	.4444	12.694	.4630	13.583	.4815	14.528	.5000	15.528	17
18	.4444	13.000	.4630	13.861	.4815	14.778	.5000	15.750	.5185	16.778	18
19	.4630	14.194	.4815	15.083	.5000	16.028	.5185	17.028	.5370	18.083	19
20	.4815	15.444	.5000	16.361	.5185	17.333	.5370	18.361	.5556	19.444	20
21	.5000	16.750	.5185	17.694	.5370	18.694	.5556	19.750	.5741	20.861	21
22	.5185	18.111	.5370	19.083	.5556	20.111	.5741	21.194	.5926	22.333	22
23	.5370	19.528	.5556	20.528	.5741	21.583	.5926	22.694	.6111	23.861	23
24	.5556	21.000	.5741	22.028	.5926	23.111	.6111	24.250	.6296	25.444	24
25	.5741	22.528	.5926	23.583	.6111	24.694	.6296	25.861	.6481	27.083	25
26	.5926	24.111	.6111	25.194	.6296	26.333	.6481	27.528	.6667	28.778	26
27	.6111	25.750	.6296	26.861	.6481	28.028	.6667	29.250	.6852	30.528	27
28	.6296	27.444	.6481	28.583	.6667	29.778	.6852	31.028	.7037	32.333	28
29	.6481	29.194	.6667	30.361	.6852	31.583	.7037	32.861	.7222	34.194	29
30	.6667	31.000	.6852	32.194	.7037	33.444	.7222	34.750	.7407	36.111	30
31	.6852	32.861	.7037	34.083	.7222	35.361	.7407	36.694	.7593	38.083	31
32	.7037	34.778	.7222	36.028	.7407	37.333	.7593	38.694	.7778	40.111	32
33	.7222	36.750	.7407	38.028	.7593	39.361	.7778	40.750	.7963	42.194	33
34	.7407	38.778	.7593	40.083	.7778	41.444	.7963	42.861	.8148	44.333	34
35	.7593	40.861	.7778	42.194	.7963	43.583	.8148	45.028	.8333	46.528	35
36	.7778	43.000	.7963	44.361	.8148	45.778	.8333	47.250	.8519	48.778	36
37	.7963	45.194	.8148	46.583	.8333	48.028	.8519	49.528	.8704	51.083	37
38	.8148	47.444	.8333	48.861	.8519	50.333	.8704	51.861	.8889	53.444	38
39	.8333	49.750	.8519	51.194	.8704	52.694	.8889	54.250	.9074	55.861	39
40	.8519	52.111	.8704	53.583	.8889	55.111	.9074	56.694	.9259	58.333	40
41	.8704	54.528	.8889	56.028	.9074	57.583	.9259	59.194	.9444	60.861	41
42	.8889	57.000	.9074	58.528	.9259	60.111	.9444	61.750	.9630	63.444	42
43	.9074	59.528	.9259	61.083	.9444	62.694	.9630	64.361	.9815	66.083	43
44	.9259	62.111	.9444	63.694	.9630	65.333	.9815	67.028	1.0000	68.778	44
45	.9444	64.750	.9630	66.361	.9815	68.028	1.0000	69.750	1.0185	71.528	45
46	.9630	67.444	.9815	69.083	1.0000	70.778	1.0185	72.528	1.0370	74.333	46
47	.9815	70.194	1.0000	71.861	1.0185	73.583	1.0370	75.361	1.0556	77.194	47
48	1.0000	73.000	1.0185	74.694	1.0370	76.444	1.0556	78.250	1.0741	80.111	48
49	1.0185	75.861	1.0370	77.583	1.0556	79.361	1.0741	81.194	1.0926	83.083	49
50	1.0370	78.778	1.0556	80.528	1.0741	82.333	1.0926	84.194	1.1111	86.111	50
	6		7		8		9		10		

TABLE XXX.—BASE 1—SLOPES $2\frac{1}{4}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	3.361	.2222	4.000	.2407	4.694	.2593	5.444	.2778	6.250	0
1	.2222	3.694	.2407	4.361	.2593	5.083	.2778	5.861	.2963	6.694	1
2	.2407	4.083	.2593	4.778	.2778	5.528	.2963	6.333	.3148	7.194	2
3	.2593	4.528	.2778	5.250	.2963	6.028	.3148	6.861	.3333	7.750	3
4	.2778	5.028	.2963	5.778	.3148	6.583	.3333	7.444	.3519	8.361	4
5	.2963	5.583	.3148	6.361	.3333	7.194	.3519	8.083	.3704	9.028	5
6	.3148	6.194	.3333	7.000	.3519	7.861	.3704	8.778	.3889	9.750	6
7	.3333	6.861	.3519	7.694	.3704	8.583	.3889	9.528	.4074	10.528	7
8	.3519	7.583	.3704	8.444	.3889	9.361	.4074	10.333	.4259	11.361	8
9	.3704	8.361	.3889	9.250	.4074	10.194	.4259	11.194	.4444	12.250	9
10	.3889	9.194	.4074	10.111	.4259	11.083	.4444	12.111	.4630	13.194	10
11	.4074	10.083	.4259	11.028	.4444	12.028	.4630	13.083	.4815	14.194	11
12	.4259	11.028	.4444	12.000	.4630	13.028	.4815	14.111	.5000	15.250	12
13	.4444	12.028	.4630	13.028	.4815	14.083	.5000	15.194	.5185	16.361	13
14	.4630	13.083	.4815	14.111	.5000	15.194	.5185	16.333	.5370	17.528	14
15	.4815	14.194	.5000	15.250	.5185	16.361	.5370	17.528	.5556	18.750	15
16	.5000	15.361	.5185	16.444	.5370	17.583	.5556	18.778	.5741	20.028	16
17	.5185	16.583	.5370	17.694	.5556	18.861	.5741	20.083	.5926	21.361	17
18	.5370	17.861	.5556	19.000	.5741	20.194	.5926	21.444	.6111	22.750	18
19	.5556	19.194	.5741	20.361	.5926	21.583	.6111	22.861	.6296	24.194	19
20	.5741	20.583	.5926	21.778	.6111	23.028	.6296	24.333	.6481	25.694	20
21	.5926	22.028	.6111	23.250	.6296	24.528	.6481	25.861	.6667	27.250	21
22	.6111	23.528	.6296	24.778	.6481	26.083	.6667	27.444	.6852	28.861	22
23	.6296	25.083	.6481	26.361	.6667	27.694	.6852	29.083	.7037	30.528	23
24	.6481	26.694	.6667	28.000	.6852	29.361	.7037	30.778	.7222	32.250	24
25	.6667	28.361	.6852	29.694	.7037	31.083	.7222	32.528	.7407	34.028	25
26	.6852	30.083	.7037	31.444	.7222	32.861	.7407	34.333	.7593	35.861	26
27	.7037	31.861	.7222	33.250	.7407	34.694	.7593	36.194	.7778	37.750	27
28	.7222	33.694	.7407	35.111	.7593	36.583	.7778	38.111	.7963	39.694	28
29	.7407	35.583	.7593	37.028	.7778	38.528	.7963	40.083	.8148	41.694	29
30	.7593	37.528	.7778	39.000	.7963	40.528	.8148	42.111	.8333	43.750	30
31	.7778	39.528	.7963	41.028	.8148	42.583	.8333	44.194	.8519	45.861	31
32	.7963	41.583	.8148	43.111	.8333	44.694	.8519	46.333	.8704	48.028	32
33	.8148	43.694	.8333	45.250	.8519	46.861	.8704	48.528	.8889	50.250	33
34	.8333	45.861	.8519	47.444	.8704	49.083	.8889	50.778	.9074	52.528	34
35	.8519	48.083	.8704	49.694	.8889	51.361	.9074	53.083	.9259	54.861	35
36	.8704	50.361	.8889	52.000	.9074	53.694	.9259	55.444	.9444	57.250	36
37	.8889	52.694	.9074	54.361	.9259	56.083	.9444	57.861	.9630	59.694	37
38	.9074	55.083	.9259	56.778	.9444	58.528	.9630	60.333	.9815	62.194	38
39	.9259	57.528	.9444	59.250	.9630	61.028	.9815	62.861	1.0000	64.750	39
40	.9444	60.028	.9630	61.778	.9815	63.583	1.0000	65.444	1.0185	67.361	40
41	.9630	62.583	.9815	64.361	1.0000	66.194	1.0185	68.083	1.0370	70.028	41
42	.9815	65.194	1.0000	67.000	1.0185	68.861	1.0370	70.778	1.0556	72.750	42
43	1.0000	67.861	1.0185	69.694	1.0370	71.583	1.0556	73.528	1.0741	75.528	43
44	1.0185	70.583	1.0370	72.444	1.0556	74.361	1.0741	76.333	1.0926	78.361	44
45	1.0370	73.361	1.0556	75.250	1.0741	77.194	1.0926	79.194	1.1111	81.250	45
46	1.0556	76.194	1.0741	78.111	1.0926	80.083	1.1111	82.111	1.1296	84.194	46
47	1.0741	79.083	1.0926	81.028	1.1111	83.028	1.1296	85.083	1.1481	87.194	47
48	1.0926	82.028	1.1111	84.000	1.1296	86.028	1.1481	88.111	1.1667	90.250	48
49	1.1111	85.028	1.1296	87.028	1.1481	89.083	1.1667	91.194	1.1852	93.361	49
50	1.1296	88.083	1.1481	90.111	1.1667	92.194	1.1852	94.333	1.2047	96.528	50
	11		12		13		14		15		

TABLE XXX.—BASE 1—SLOPES 2¼ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	7.111	.3148	8.028	.3333	9.000	.3519	10.028	.3704	11.111	0
1	.3148	7.583	.3333	8.528	.3519	9.528	.3704	10.583	.3889	11.694	1
2	.3333	8.111	.3519	9.083	.3704	10.111	.3889	11.194	.4074	12.333	2
3	.3519	8.694	.3704	9.694	.3889	10.750	.4074	11.861	.4259	13.028	3
4	.3704	9.333	.3889	10.361	.4074	11.444	.4259	12.583	.4444	13.778	4
5	.3889	10.028	.4074	11.083	.4259	12.194	.4444	13.361	.4630	14.583	5
6	.4074	10.778	.4259	11.861	.4444	13.000	.4630	14.194	.4815	15.444	6
7	.4259	11.583	.4444	12.694	.4630	13.861	.4815	15.083	.5000	16.361	7
8	.4444	12.444	.4630	13.583	.4815	14.778	.5000	16.028	.5185	17.333	8
9	.4630	13.361	.4815	14.528	.5000	15.750	.5185	17.028	.5370	18.361	9
10	.4815	14.333	.5000	15.528	.5185	16.778	.5370	18.083	.5556	19.444	10
11	.5000	15.361	.5185	16.583	.5370	17.861	.5556	19.194	.5741	20.583	11
12	.5185	16.444	.5370	17.694	.5556	19.000	.5741	20.361	.5926	21.778	12
13	.5370	17.583	.5556	18.861	.5741	20.194	.5926	21.583	.6111	23.028	13
14	.5556	18.778	.5741	20.083	.5926	21.444	.6111	22.861	.6296	24.333	14
15	.5741	20.028	.5926	21.361	.6111	22.750	.6296	24.194	.6481	25.694	15
16	.5926	21.333	.6111	22.694	.6296	24.111	.6481	25.583	.6667	27.111	16
17	.6111	22.694	.6296	24.083	.6481	25.528	.6667	27.028	.6852	28.583	17
18	.6296	24.111	.6481	25.528	.6667	27.000	.6852	28.528	.7037	30.111	18
19	.6481	25.583	.6667	27.028	.6852	28.528	.7037	30.083	.7222	31.694	19
20	.6667	27.111	.6852	28.583	.7037	30.111	.7222	31.694	.7407	33.333	20
21	.6852	28.694	.7037	30.194	.7222	31.750	.7407	33.361	.7593	35.028	21
22	.7037	30.333	.7222	31.861	.7407	33.444	.7593	35.083	.7778	36.778	22
23	.7222	32.028	.7407	33.583	.7593	35.194	.7778	36.861	.7963	38.583	23
24	.7407	33.778	.7593	35.361	.7778	37.000	.7963	38.694	.8148	40.444	24
25	.7593	35.583	.7778	37.194	.7963	38.861	.8148	40.583	.8333	42.361	25
26	.7778	37.444	.7963	39.083	.8148	40.778	.8333	42.528	.8519	44.333	26
27	.7963	39.361	.8148	41.028	.8333	42.750	.8519	44.528	.8704	46.361	27
28	.8148	41.333	.8333	43.028	.8519	44.778	.8704	46.583	.8889	48.444	28
29	.8333	43.361	.8519	45.083	.8704	46.861	.8889	48.694	.9074	50.583	29
30	.8519	45.444	.8704	47.194	.8889	49.000	.9074	50.861	.9259	52.778	30
31	.8704	47.583	.8889	49.361	.9074	51.194	.9259	53.083	.9444	55.028	31
32	.8889	49.778	.9074	51.583	.9259	53.444	.9444	55.361	.9630	57.333	32
33	.9074	52.028	.9259	53.861	.9444	55.750	.9630	57.694	.9815	59.694	33
34	.9259	54.333	.9444	56.194	.9630	58.111	.9815	60.083	1.0000	62.111	34
35	.9444	56.694	.9630	58.583	.9815	60.528	1.0000	62.528	1.0185	64.583	35
36	.9630	59.111	.9815	61.028	1.0000	63.000	1.0185	65.028	1.0370	67.111	36
37	.9815	61.583	1.0000	63.528	1.0185	65.528	1.0370	67.583	1.0556	69.694	37
38	1.0000	64.111	1.0185	66.083	1.0370	68.111	1.0556	70.194	1.0741	72.333	38
39	1.0185	66.694	1.0370	68.694	1.0556	70.750	1.0741	72.861	1.0926	75.028	39
40	1.0370	69.333	1.0556	71.361	1.0741	73.444	1.0926	75.583	1.1111	77.778	40
41	1.0556	72.028	1.0741	74.083	1.0926	76.194	1.1111	78.361	1.1296	80.583	41
42	1.0741	74.778	1.0926	76.861	1.1111	79.000	1.1296	81.194	1.1481	83.444	42
43	1.0926	77.583	1.1111	79.694	1.1296	81.861	1.1481	84.083	1.1667	86.361	43
44	1.1111	80.444	1.1296	82.583	1.1481	84.778	1.1667	87.028	1.1852	89.333	44
45	1.1296	83.361	1.1481	85.528	1.1667	87.750	1.1852	90.028	1.2047	92.361	45
46	1.1481	86.333	1.1667	88.528	1.1852	90.778	1.2047	93.083	1.2222	95.444	46
47	1.1667	89.361	1.1852	91.583	1.2047	93.861	1.2222	96.194	1.2407	98.583	47
48	1.1852	92.444	1.2047	94.694	1.2222	97.000	1.2407	99.361	1.2593	101.778	48
49	1.2047	95.583	1.2222	97.861	1.2407	100.194	1.2593	102.583	1.2778	105.028	49
50	1.2222	98.778	1.2407	101.083	1.2593	103.444	1.2778	105.861	1.2963	108.333	50
	16		17		18		19		20		

TABLE XXX.—BASE 1—SLOPES 2¼ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	12.250	.4074	13.444	.4259	14.694	.4444	16.000	.4630	17.361	0
1	.4074	12.861	.4259	14.083	.4444	15.361	.4630	16.694	.4815	18.083	1
2	.4259	13.528	.4444	14.778	.4630	16.083	.4815	17.444	.5000	18.861	2
3	.4444	14.250	.4630	15.528	.4815	16.861	.5000	18.250	.5185	19.694	3
4	.4630	15.028	.4815	16.333	.5000	17.694	.5185	19.111	.5370	20.583	4
5	.4815	15.861	.5000	17.194	.5185	18.583	.5370	20.028	.5556	21.528	5
6	.5000	16.750	.5185	18.111	.5370	19.528	.5556	21.000	.5741	22.528	6
7	.5185	17.694	.5370	19.083	.5556	20.528	.5741	22.028	.5926	23.583	7
8	.5370	18.694	.5556	20.111	.5741	21.583	.5926	23.111	.6111	24.694	8
9	.5556	19.750	.5741	21.194	.5926	22.694	.6111	24.250	.6296	25.861	9
10	.5741	20.861	.5926	22.333	.6111	23.861	.6296	25.444	.6481	27.083	10
11	.5926	22.028	.6111	23.528	.6296	25.083	.6481	26.694	.6667	28.361	11
12	.6111	23.250	.6296	24.778	.6481	26.361	.6667	28.000	.6852	29.694	12
13	.6296	24.528	.6481	26.083	.6667	27.694	.6852	29.361	.7037	31.083	13
14	.6481	25.861	.6667	27.444	.6852	29.083	.7037	30.778	.7222	32.528	14
15	.6667	27.250	.6852	28.861	.7037	30.528	.7222	32.250	.7407	34.028	15
16	.6852	28.694	.7037	30.333	.7222	32.028	.7407	33.778	.7593	35.583	16
17	.7037	30.194	.7222	31.861	.7407	33.583	.7593	35.361	.7778	37.194	17
18	.7222	31.750	.7407	33.444	.7593	35.194	.7778	37.000	.7963	38.861	18
19	.7407	33.361	.7593	35.083	.7778	36.861	.7963	38.694	.8148	40.583	19
20	.7593	35.028	.7778	36.778	.7963	38.583	.8148	40.444	.8333	42.361	20
21	.7778	36.750	.7963	38.528	.8148	40.361	.8333	42.250	.8519	44.194	21
22	.7963	38.528	.8148	40.333	.8333	42.194	.8519	44.111	.8704	46.083	22
23	.8148	40.361	.8333	42.194	.8519	44.083	.8704	46.028	.8889	48.028	23
24	.8333	42.250	.8519	44.111	.8704	46.028	.8889	48.000	.9074	50.028	24
25	.8519	44.194	.8704	46.083	.8889	48.028	.9074	50.028	.9259	52.083	25
26	.8704	46.194	.8889	48.111	.9074	50.083	.9259	52.111	.9444	54.194	26
27	.8889	48.250	.9074	50.194	.9259	52.194	.9444	54.250	.9630	56.361	27
28	.9074	50.361	.9259	52.333	.9444	54.361	.9630	56.444	.9815	58.583	28
29	.9259	52.528	.9444	54.528	.9630	56.583	.9815	58.694	1.0000	60.861	29
30	.9444	54.750	.9630	56.778	.9815	58.861	1.0000	61.000	1.0185	63.194	30
31	.9630	57.028	.9815	59.083	1.0000	61.194	1.0185	63.361	1.0370	65.583	31
32	.9815	59.361	1.0000	61.444	1.0185	63.583	1.0370	65.778	1.0556	68.028	32
33	1.0000	61.750	1.0185	63.861	1.0370	66.028	1.0556	68.250	1.0741	70.528	33
34	1.0185	64.194	1.0370	66.333	1.0556	68.528	1.0741	70.778	1.0926	73.083	34
35	1.0370	66.694	1.0556	68.861	1.0741	71.083	1.0926	73.361	1.1111	75.694	35
36	1.0556	69.250	1.0741	71.444	1.0926	73.694	1.1111	76.000	1.1296	78.361	36
37	1.0741	71.861	1.0926	74.083	1.1111	76.361	1.1296	78.694	1.1481	81.083	37
38	1.0926	74.528	1.1111	76.778	1.1296	79.083	1.1481	81.444	1.1667	83.861	38
39	1.1111	77.250	1.1296	79.528	1.1481	81.861	1.1667	84.250	1.1852	86.694	39
40	1.1296	80.028	1.1481	82.333	1.1667	84.694	1.1852	87.111	1.2047	89.583	40
41	1.1481	82.861	1.1667	85.194	1.1852	87.583	1.2047	90.028	1.2222	92.528	41
42	1.1667	85.750	1.1852	88.111	1.2047	90.528	1.2222	93.000	1.2407	95.528	42
43	1.1852	88.694	1.2047	91.083	1.2222	93.528	1.2407	96.028	1.2593	98.583	43
44	1.2047	91.694	1.2222	94.111	1.2407	96.583	1.2593	99.111	1.2778	101.694	44
45	1.2222	94.750	1.2407	97.194	1.2593	99.694	1.2778	102.250	1.2963	104.861	45
46	1.2407	97.861	1.2593	100.333	1.2778	102.861	1.2963	105.444	1.3148	108.083	46
47	1.2593	101.028	1.2778	103.528	1.2963	106.083	1.3148	108.694	1.3333	111.361	47
48	1.2778	104.250	1.2963	106.778	1.3148	109.361	1.3333	112.000	1.3519	114.694	48
49	1.2963	107.528	1.3148	110.083	1.3333	112.694	1.3519	115.361	1.3704	118.083	49
50	1.3148	110.861	1.3333	113.444	1.3519	116.083	1.3704	118.778	1.3889	121.528	50
	21		22		23		24		25		

TABLE XXX.—BASE 1—SLOPES 2¼ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	18.778	.5000	20.250	.5185	21.778	.5370	23.361	.5556	25.000	0
1	.5000	19.528	.5185	21.028	.5370	22.583	.5556	24.194	.5741	25.861	1
2	.5185	20.333	.5370	21.861	.5556	23.444	.5741	25.083	.5926	26.778	2
3	.5370	21.194	.5556	22.750	.5741	24.361	.5926	26.028	.6111	27.750	3
4	.5556	22.111	.5741	23.694	.5926	25.333	.6111	27.028	.6296	28.778	4
5	.5741	23.083	.5926	24.694	.6111	26.361	.6296	28.083	.6481	29.861	5
6	.5926	24.111	.6111	25.750	.6296	27.444	.6481	29.194	.6667	31.000	6
7	.6111	25.194	.6296	26.861	.6481	28.583	.6667	30.361	.6852	32.194	7
8	.6296	26.333	.6481	28.028	.6667	29.778	.6852	31.583	.7037	33.444	8
9	.6481	27.528	.6667	29.250	.6852	31.028	.7037	32.861	.7222	34.750	9
10	.6667	28.778	.6852	30.528	.7037	32.333	.7222	34.194	.7407	36.111	10
11	.6852	30.083	.7037	31.861	.7222	33.694	.7407	35.583	.7593	37.528	11
12	.7037	31.444	.7222	33.250	.7407	35.111	.7593	37.028	.7778	39.000	12
13	.7222	32.861	.7407	34.694	.7593	36.583	.7778	38.528	.7963	40.528	13
14	.7407	34.333	.7593	36.194	.7778	38.111	.7963	40.083	.8148	42.111	14
15	.7593	35.861	.7778	37.750	.7963	39.694	.8148	41.694	.8333	43.750	15
16	.7778	37.444	.7963	39.361	.8148	41.333	.8333	43.361	.8519	45.444	16
17	.7963	39.083	.8148	41.028	.8333	43.028	.8519	45.083	.8704	47.194	17
18	.8148	40.778	.8333	42.750	.8519	44.778	.8704	46.861	.8889	49.000	18
19	.8333	42.528	.8519	44.528	.8704	46.583	.8889	48.694	.9074	50.861	19
20	.8519	44.333	.8704	46.361	.8889	48.444	.9074	50.583	.9259	52.778	20
21	.8704	46.194	.8889	48.250	.9074	50.361	.9259	52.528	.9444	54.750	21
22	.8889	48.111	.9074	50.194	.9259	52.333	.9444	54.528	.9630	56.778	22
23	.9074	50.083	.9259	52.194	.9444	54.361	.9630	56.583	.9815	58.861	23
24	.9259	52.111	.9444	54.250	.9630	56.444	.9815	58.694	1.0000	61.000	24
25	.9444	54.194	.9630	56.361	.9815	58.583	1.0000	60.861	1.0185	63.194	25
26	.9630	56.333	.9815	58.528	1.0000	60.778	1.0185	63.083	1.0370	65.444	26
27	.9815	58.528	1.0000	60.750	1.0185	63.028	1.0370	65.361	1.0556	67.750	27
28	1.0000	60.778	1.0185	63.028	1.0370	65.333	1.0556	67.694	1.0741	70.111	28
29	1.0185	63.083	1.0370	65.361	1.0556	67.694	1.0741	70.083	1.0926	72.528	29
30	1.0370	65.444	1.0556	67.750	1.0741	70.111	1.0926	72.528	1.1111	75.000	30
31	1.0556	67.861	1.0741	70.194	1.0926	72.583	1.1111	75.028	1.1296	77.528	31
32	1.0741	70.333	1.0926	72.694	1.1111	75.111	1.1296	77.583	1.1481	80.111	32
33	1.0926	72.861	1.1111	75.250	1.1296	77.694	1.1481	80.194	1.1667	82.750	33
34	1.1111	75.444	1.1296	77.861	1.1481	80.333	1.1667	82.861	1.1852	85.444	34
35	1.1296	78.083	1.1481	80.528	1.1667	83.028	1.1852	85.583	1.2047	88.194	35
36	1.1481	80.778	1.1667	83.250	1.1852	85.778	1.2047	88.361	1.2222	91.000	36
37	1.1667	83.528	1.1852	86.028	1.2047	88.583	1.2222	91.194	1.2407	93.861	37
38	1.1852	86.333	1.2047	88.861	1.2222	91.444	1.2407	94.083	1.2593	96.778	38
39	1.2047	89.194	1.2222	91.750	1.2407	94.361	1.2593	97.028	1.2778	99.750	39
40	1.2222	92.111	1.2407	94.694	1.2593	97.333	1.2778	100.028	1.2963	102.778	40
41	1.2407	95.083	1.2593	97.694	1.2778	100.361	1.2963	103.083	1.3148	105.861	41
42	1.2593	98.111	1.2778	100.750	1.2963	103.444	1.3148	106.194	1.3333	109.000	42
43	1.2778	101.194	1.2963	103.861	1.3148	106.583	1.3333	109.361	1.3519	112.194	43
44	1.2963	104.333	1.3148	107.028	1.3333	109.778	1.3519	112.583	1.3704	115.444	44
45	1.3148	107.528	1.3333	110.250	1.3519	113.028	1.3704	115.861	1.3889	118.750	45
46	1.3333	110.778	1.3519	113.528	1.3704	116.333	1.3889	119.194	1.4074	122.111	46
47	1.3519	114.083	1.3704	116.861	1.3889	119.694	1.4074	122.583	1.4259	125.528	47
48	1.3704	117.441	1.3889	120.250	1.4074	123.111	1.4259	126.028	1.4444	129.000	48
49	1.3889	120.861	1.4074	123.694	1.4259	126.583	1.4444	129.528	1.4630	132.528	59
50	1.4074	124.333	1.4259	127.191	1.4444	130.111	1.4630	133.083	1.4815	136.111	50
	26		27		28		29		30		

TABLE XXX.—BASE 1—SLOPES 2¼ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	26.694	.5926	28.444	.6111	30.250	.6296	32.111	.6481	34.028	0
1	.5926	27.583	.6111	29.361	.6296	31.194	.6481	33.083	.6667	35.028	1
2	.6111	28.528	.6296	30.333	.6481	32.194	.6667	34.111	.6852	36.083	2
3	.6296	29.528	.6481	31.361	.6667	33.250	.6852	35.194	.7037	37.194	3
4	.6481	30.583	.6667	32.444	.6852	34.361	.7037	36.333	.7222	38.361	4
5	.6667	31.694	.6852	33.583	.7037	35.528	.7222	37.528	.7407	39.583	5
6	.6852	32.861	.7037	34.778	.7222	36.750	.7407	38.778	.7593	40.861	6
7	.7037	34.083	.7222	36.028	.7407	38.028	.7593	40.083	.7778	42.194	7
8	.7222	35.361	.7407	37.333	.7593	39.361	.7778	41.444	.7963	43.583	8
9	.7407	36.694	.7593	38.694	.7778	40.750	.7963	42.861	.8148	45.028	9
10	.7593	38.083	.7778	40.111	.7963	42.194	.8148	44.333	.8333	46.528	10
11	.7778	39.528	.7963	41.583	.8148	43.694	.8333	45.861	.8519	48.083	11
12	.7963	41.028	.8148	43.111	.8333	45.250	.8519	47.444	.8704	49.694	12
13	.8148	42.583	.8333	44.694	.8519	46.861	.8704	49.083	.8889	51.361	13
14	.8333	44.194	.8519	46.333	.8704	48.528	.8889	50.778	.9074	53.083	14
15	.8519	45.861	.8704	48.028	.8889	50.250	.9074	52.528	.9259	54.861	15
16	.8704	47.583	.8889	49.778	.9074	52.028	.9259	54.333	.9444	56.694	16
17	.8889	49.361	.9074	51.583	.9259	53.861	.9444	56.194	.9630	58.583	17
18	.9074	51.194	.9259	53.444	.9444	55.750	.9630	58.111	.9815	60.528	18
19	.9259	53.083	.9444	55.361	.9630	57.694	.9815	60.083	1.0000	62.528	19
20	.9444	55.028	.9630	57.333	.9815	59.694	1.0000	62.111	1.0185	64.583	20
21	.9630	57.028	.9815	59.361	1.0000	61.750	1.0185	64.194	1.0370	66.694	21
22	.9815	59.083	1.0000	61.444	1.0185	63.861	1.0370	66.333	1.0556	68.861	22
23	1.0000	61.194	1.0185	63.583	1.0370	66.028	1.0556	68.528	1.0741	71.083	23
24	1.0185	63.361	1.0370	65.778	1.0556	68.250	1.0741	70.778	1.0926	73.361	24
25	1.0370	65.583	1.0556	68.028	1.0741	70.528	1.0926	73.083	1.1111	75.694	25
26	1.0556	67.861	1.0741	70.333	1.0926	72.861	1.1111	75.444	1.1296	78.083	26
27	1.0741	70.194	1.0926	72.694	1.1111	75.250	1.1296	77.861	1.1481	80.528	27
28	1.0926	72.583	1.1111	75.111	1.1296	77.694	1.1481	80.333	1.1667	83.028	28
29	1.1111	75.028	1.1296	77.583	1.1481	80.194	1.1667	82.861	1.1852	85.583	29
30	1.1296	77.528	1.1481	80.111	1.1667	82.750	1.1852	85.444	1.2047	88.194	30
31	1.1481	80.083	1.1667	82.694	1.1852	85.361	1.2047	88.083	1.2222	90.861	31
32	1.1667	82.694	1.1852	85.333	1.2047	88.028	1.2222	90.778	1.2407	93.583	32
33	1.1852	85.361	1.2047	88.028	1.2222	90.750	1.2407	93.528	1.2593	96.361	33
34	1.2047	88.083	1.2222	90.778	1.2407	93.528	1.2593	96.333	1.2778	99.194	34
35	1.2222	90.861	1.2407	93.583	1.2593	96.361	1.2778	99.194	1.2963	102.083	35
36	1.2407	93.694	1.2593	96.444	1.2778	99.250	1.2963	102.111	1.3148	105.028	36
37	1.2593	96.583	1.2778	99.361	1.2963	102.194	1.3148	105.083	1.3333	108.028	37
38	1.2778	99.528	1.2963	102.333	1.3148	105.194	1.3333	108.111	1.3519	111.083	38
39	1.2963	102.528	1.3148	105.361	1.3333	108.250	1.3519	111.194	1.3704	114.194	39
40	1.3148	105.583	1.3333	108.444	1.3519	111.361	1.3704	114.333	1.3889	117.361	40
41	1.3333	108.694	1.3519	111.583	1.3704	114.528	1.3889	117.528	1.4074	120.583	41
42	1.3519	111.861	1.3704	114.778	1.3889	117.750	1.4074	120.778	1.4259	123.861	42
43	1.3704	115.083	1.3889	118.028	1.4074	121.028	1.4259	124.083	1.4444	127.194	43
44	1.3889	118.361	1.4074	121.333	1.4259	124.361	1.4444	127.444	1.4630	130.583	44
45	1.4074	121.694	1.4259	124.694	1.4444	127.750	1.4630	130.861	1.4815	134.028	45
46	1.4259	125.083	1.4444	128.111	1.4630	131.194	1.4815	134.333	1.5000	137.528	46
47	1.4444	128.528	1.4630	131.583	1.4815	134.694	1.5000	137.861	1.5185	141.083	47
48	1.4630	132.028	1.4815	135.111	1.5000	138.250	1.5185	141.444	1.5370	144.694	48
49	1.4815	135.583	1.5000	138.694	1.5185	141.861	1.5370	145.083	1.5556	148.361	49
50	1.5000	139.194	1.5185	142.333	1.5370	145.528	1.5556	148.778	1.5741	152.083	50
	31		32		33		34		35		

TABLE XXX.—BASE 1—SLOPES 2½ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	36.000	.6852	38.028	.7037	40.111	.7222	42.250	.7407	44.444	0
1	.6852	37.028	.7037	39.083	.7222	41.194	.7407	43.361	.7593	45.583	1
2	.7037	38.111	.7222	40.194	.7407	42.333	.7593	44.528	.7778	46.778	2
3	.7222	39.250	.7407	41.361	.7593	43.528	.7778	45.750	.7963	48.028	3
4	.7407	40.444	.7593	42.583	.7778	44.778	.7963	47.028	.8148	49.333	4
5	.7593	41.694	.7778	43.861	.7963	46.083	.8148	48.361	.8333	50.694	5
6	.7778	43.000	.7963	45.194	.8148	47.444	.8333	49.750	.8519	52.111	6
7	.7963	44.361	.8148	46.583	.8333	48.861	.8519	51.194	.8704	53.583	7
8	.8148	45.778	.8333	48.028	.8519	50.333	.8704	52.694	.8889	55.111	8
9	.8333	47.250	.8519	49.528	.8704	51.861	.8889	54.250	.9074	56.694	9
10	.8519	48.778	.8704	51.083	.8889	53.444	.9074	55.861	.9259	58.333	10
11	.8704	50.361	.8889	52.694	.9074	55.083	.9259	57.528	.9444	60.028	11
12	.8889	52.000	.9074	54.361	.9259	56.778	.9444	59.250	.9630	61.778	12
13	.9074	53.694	.9259	56.083	.9444	58.528	.9630	61.028	.9815	63.583	13
14	.9259	55.444	.9444	57.861	.9630	60.333	.9815	62.861	1.0000	65.444	14
15	.9444	57.250	.9630	59.694	.9815	62.194	1.0000	64.750	1.0185	67.361	15
16	.9630	59.111	.9815	61.583	1.0000	64.111	1.0185	66.694	1.0370	69.333	16
17	.9815	61.028	1.0000	63.528	1.0185	66.083	1.0370	68.694	1.0556	71.361	17
18	1.0000	63.000	1.0185	65.528	1.0370	68.111	1.0556	70.750	1.0741	73.444	18
19	1.0185	65.028	1.0370	67.583	1.0556	70.194	1.0741	72.861	1.0926	75.583	19
20	1.0370	67.111	1.0556	69.694	1.0741	72.333	1.0926	75.028	1.1111	77.778	20
21	1.0556	69.250	1.0741	71.861	1.0926	74.528	1.1111	77.250	1.1296	80.028	21
22	1.0741	71.444	1.0926	74.083	1.1111	76.778	1.1296	79.528	1.1481	82.333	22
23	1.0926	73.694	1.1111	76.361	1.1296	79.083	1.1481	81.861	1.1667	84.694	23
24	1.1111	76.000	1.1296	78.694	1.1481	81.444	1.1667	84.250	1.1852	87.111	24
25	1.1296	78.361	1.1481	81.083	1.1667	83.861	1.1852	86.694	1.2047	89.583	25
26	1.1481	80.778	1.1667	83.528	1.1852	86.333	1.2047	89.194	1.2222	92.111	26
27	1.1667	83.250	1.1852	86.028	1.2047	88.861	1.2222	91.750	1.2407	94.694	27
28	1.1852	85.778	1.2047	88.583	1.2222	91.444	1.2407	94.361	1.2593	97.333	28
29	1.2047	88.361	1.2222	91.194	1.2407	94.083	1.2593	97.028	1.2778	100.028	29
30	1.2222	91.000	1.2407	93.861	1.2593	96.778	1.2778	99.750	1.2963	102.778	30
31	1.2407	93.694	1.2593	96.583	1.2778	99.528	1.2963	102.528	1.3148	105.583	31
32	1.2593	96.444	1.2778	99.361	1.2963	102.333	1.3148	105.361	1.3333	108.444	32
33	1.2778	99.250	1.2963	102.194	1.3148	105.194	1.3335	108.250	1.3519	111.361	33
34	1.2963	102.111	1.3148	105.083	1.3333	108.111	1.3519	111.194	1.3704	114.333	34
35	1.3148	105.028	1.3333	108.028	1.3519	111.083	1.3704	114.194	1.3889	117.361	35
36	1.3333	108.000	1.3519	111.028	1.3704	114.111	1.3889	117.250	1.4074	120.444	36
37	1.3519	111.028	1.3704	114.083	1.3889	117.194	1.4074	120.361	1.4259	123.583	37
38	1.3704	114.111	1.3889	117.194	1.4074	120.333	1.4259	123.528	1.4444	126.778	38
39	1.3889	117.250	1.4074	120.361	1.4259	123.528	1.4444	126.750	1.4630	130.028	39
40	1.4074	120.444	1.4259	123.583	1.4444	126.778	1.4630	130.028	1.4815	133.333	40
41	1.4259	123.694	1.4444	126.861	1.4630	130.083	1.4815	133.361	1.5000	136.694	41
42	1.4444	127.000	1.4630	130.194	1.4815	133.444	1.5000	136.750	1.5185	140.111	42
43	1.4630	130.361	1.4815	133.583	1.5000	136.861	1.5185	140.194	1.5370	143.583	43
44	1.4815	133.778	1.5000	137.028	1.5185	140.333	1.5370	143.694	1.5556	147.111	44
45	1.5000	137.250	1.5185	140.528	1.5370	143.861	1.5556	147.250	1.5741	150.694	45
46	1.5185	140.778	1.5370	144.083	1.5556	147.444	1.5741	150.861	1.5926	154.333	46
47	1.5370	144.361	1.5556	147.694	1.5741	151.083	1.5926	154.528	1.6111	158.028	47
48	1.5556	148.000	1.5741	151.361	1.5926	154.778	1.6111	158.250	1.6296	161.778	48
49	1.5741	151.694	1.5926	155.083	1.6111	158.528	1.6296	162.028	1.6481	165.583	49
50	1.5926	155.444	1.6111	158.861	1.6296	162.333	1.6481	165.861	1.6667	169.444	50
	36		37		38		39		40		

TABLE XXX.—BASE 1—SLOPES $2\frac{1}{4}$ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	46.694	.7778	49.000	.7963	51.361	.8148	53.778	.8333	56.250	0
1	.7778	47.861	.7963	50.194	.8148	52.583	.8333	55.028	.8519	57.528	1
2	.7963	49.083	.8148	51.444	.8333	53.861	.8519	56.333	.8704	58.861	2
3	.8148	50.361	.8333	52.750	.8519	55.194	.8704	57.694	.8889	60.250	3
4	.8333	51.694	.8519	54.111	.8704	56.583	.8889	59.111	.9074	61.694	4
5	.8519	53.083	.8704	55.528	.8889	58.028	.9074	60.583	.9259	63.194	5
6	.8704	54.528	.8889	57.000	.9074	59.528	.9259	62.111	.9444	64.750	6
7	.8889	56.028	.9074	58.528	.9259	61.083	.9444	63.694	.9630	66.361	7
8	.9074	57.583	.9259	60.111	.9444	62.694	.9630	65.333	.9815	68.028	8
9	.9259	59.194	.9444	61.750	.9630	64.361	.9815	67.028	1.0000	69.750	9
10	.9444	60.861	.9630	63.444	.9815	66.083	1.0000	68.778	1.0185	71.528	10
11	.9630	62.583	.9815	65.194	1.0000	67.861	1.0185	70.583	1.0370	73.361	11
12	.9815	64.361	1.0000	67.000	1.0185	69.694	1.0370	72.444	1.0556	75.250	12
13	1.0000	66.194	1.0185	68.861	1.0370	71.583	1.0556	74.361	1.0741	77.194	13
14	1.0185	68.083	1.0370	70.778	1.0556	73.528	1.0741	76.333	1.0926	79.194	14
15	1.0370	70.028	1.0556	72.750	1.0741	75.528	1.0926	78.361	1.1111	81.250	15
16	1.0556	72.028	1.0741	74.778	1.0926	77.583	1.1111	80.444	1.1296	83.361	16
17	1.0741	74.083	1.0926	76.861	1.1111	79.694	1.1296	82.583	1.1481	85.528	17
18	1.0926	76.194	1.1111	79.000	1.1296	81.861	1.1481	84.778	1.1667	87.750	18
19	1.1111	78.361	1.1296	81.194	1.1481	84.083	1.1667	87.028	1.1852	90.028	19
20	1.1296	80.583	1.1481	83.444	1.1667	86.361	1.1852	89.333	1.2047	92.361	20
21	1.1481	82.861	1.1667	85.750	1.1852	88.694	1.2047	91.694	1.2222	94.750	21
22	1.1667	85.194	1.1852	88.111	1.2047	91.083	1.2222	94.111	1.2407	97.194	22
23	1.1852	87.583	1.2047	90.528	1.2222	93.528	1.2407	96.583	1.2593	99.694	23
24	1.2047	90.028	1.2222	93.000	1.2407	96.028	1.2593	99.111	1.2778	102.250	24
25	1.2222	92.528	1.2407	95.528	1.2593	98.583	1.2778	101.694	1.2963	104.861	25
26	1.2407	95.083	1.2593	98.111	1.2778	101.194	1.2963	104.333	1.3148	107.528	26
27	1.2593	97.694	1.2778	100.750	1.2963	103.861	1.3148	107.028	1.3333	110.250	27
28	1.2778	100.361	1.2963	103.444	1.3148	106.583	1.3333	109.778	1.3519	113.028	28
29	1.2963	103.083	1.3148	106.194	1.3333	109.361	1.3519	112.583	1.3704	115.861	29
30	1.3148	105.861	1.3333	109.000	1.3519	112.194	1.3704	115.444	1.3889	118.750	30
31	1.3333	108.694	1.3519	111.861	1.3704	115.083	1.3889	118.361	1.4074	121.694	31
32	1.3519	111.583	1.3704	114.778	1.3889	118.028	1.4074	121.333	1.4259	124.694	32
33	1.3704	114.528	1.3889	117.750	1.4074	121.028	1.4259	124.361	1.4444	127.750	33
34	1.3889	117.528	1.4074	120.778	1.4259	124.083	1.4444	127.444	1.4630	130.861	34
35	1.4074	120.583	1.4259	123.861	1.4444	127.194	1.4630	130.583	1.4815	134.028	35
36	1.4259	123.694	1.4444	127.000	1.4630	130.361	1.4815	133.778	1.5000	137.250	36
37	1.4444	126.861	1.4630	130.194	1.4815	133.583	1.5000	137.028	1.5185	140.528	37
38	1.4630	130.083	1.4815	133.444	1.5000	136.861	1.5185	140.333	1.5370	143.861	38
39	1.4815	133.361	1.5000	136.750	1.5185	140.194	1.5370	143.694	1.5556	147.250	39
40	1.5000	136.694	1.5185	140.111	1.5370	143.583	1.5556	147.111	1.5741	150.694	40
41	1.5185	140.083	1.5370	143.528	1.5556	147.028	1.5741	150.583	1.5926	154.194	41
42	1.5370	143.528	1.5556	147.000	1.5741	150.528	1.5926	154.111	1.6111	157.750	42
43	1.5556	147.028	1.5741	150.528	1.5926	154.083	1.6111	157.694	1.6296	161.361	43
44	1.5741	150.583	1.5926	154.111	1.6111	157.694	1.6296	161.333	1.6481	165.028	44
45	1.5926	154.194	1.6111	157.750	1.6296	161.361	1.6481	165.028	1.6667	168.750	45
46	1.6111	157.861	1.6296	161.444	1.6481	165.083	1.6667	168.778	1.6852	172.528	46
47	1.6296	161.583	1.6481	165.194	1.6667	168.861	1.6852	172.583	1.7037	176.361	47
48	1.6481	165.361	1.6667	169.000	1.6852	172.694	1.7037	176.444	1.7222	180.250	48
49	1.6667	169.194	1.6852	172.861	1.7037	176.583	1.7222	180.361	1.7407	184.194	49
50	1.6852	173.083	1.7037	176.778	1.7222	180.528	1.7407	184.333	1.7593	188.194	50
	41		42		43		44		45		

TABLE XXX.—BASE 1—SLOPES 2¼ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	58.778	.8704	61.361	.8889	64.000	.9074	66.694	.9259	69.444	0
1	.8704	60.083	.8889	62.694	.9074	65.361	.9259	68.083	.9444	70.861	1
2	.8889	61.444	.9074	64.083	.9259	66.778	.9444	69.528	.9630	72.333	2
3	.9074	62.861	.9259	65.528	.9444	68.250	.9630	71.028	.9815	73.861	3
4	.9259	64.333	.9444	67.028	.9630	69.778	.9815	72.583	1.0000	75.444	4
5	.9444	65.861	.9630	68.583	.9815	71.361	1.0000	74.194	1.0185	77.083	5
6	.9630	67.444	.9815	70.194	1.0000	73.000	1.0185	75.861	1.0370	78.778	6
7	.9815	69.083	1.0000	71.861	1.0185	74.694	1.0370	77.583	1.0556	80.528	7
8	1.0000	70.778	1.0185	73.583	1.0370	76.444	1.0556	79.361	1.0741	82.333	8
9	1.0185	72.528	1.0370	75.361	1.0556	78.250	1.0741	81.194	1.0926	84.194	9
10	1.0370	74.333	1.0556	77.194	1.0741	80.111	1.0926	83.083	1.1111	86.111	10
11	1.0556	76.194	1.0741	79.083	1.0926	82.028	1.1111	85.028	1.1296	88.083	11
12	1.0741	78.111	1.0926	81.028	1.1111	84.000	1.1296	87.028	1.1481	90.111	12
13	1.0926	80.083	1.1111	83.028	1.1296	86.028	1.1481	89.083	1.1667	92.194	13
14	1.1111	82.111	1.1296	85.083	1.1481	88.111	1.1667	91.194	1.1852	94.333	14
15	1.1296	84.194	1.1481	87.194	1.1667	90.250	1.1852	93.361	1.2047	96.528	15
16	1.1481	86.333	1.1667	89.361	1.1852	92.444	1.2047	95.583	1.2222	98.778	16
17	1.1667	88.528	1.1852	91.583	1.2047	94.694	1.2222	97.861	1.2407	101.083	17
18	1.1852	90.778	1.2047	93.861	1.2222	97.000	1.2407	100.194	1.2593	103.444	18
19	1.2047	93.083	1.2222	96.194	1.2407	99.361	1.2593	102.583	1.2778	105.861	19
20	1.2222	95.444	1.2407	98.583	1.2593	101.778	1.2778	105.028	1.2963	108.333	20
21	1.2407	97.861	1.2593	101.028	1.2778	104.250	1.2963	107.528	1.3148	110.861	21
22	1.2593	100.333	1.2778	103.528	1.2963	106.778	1.3148	110.083	1.3333	113.444	22
23	1.2778	102.861	1.2963	106.083	1.3148	109.361	1.3333	112.694	1.3519	116.083	23
24	1.2963	105.444	1.3148	108.694	1.3333	112.000	1.3519	115.361	1.3704	118.778	24
25	1.3148	108.083	1.3333	111.361	1.3519	114.694	1.3704	118.083	1.3889	121.528	25
26	1.3333	110.778	1.3519	114.083	1.3704	117.444	1.3889	120.861	1.4074	124.333	26
27	1.3519	113.528	1.3704	116.861	1.3889	120.250	1.4074	123.694	1.4259	127.194	27
28	1.3704	116.333	1.3889	119.694	1.4074	123.111	1.4259	126.583	1.4444	130.111	28
29	1.3889	119.194	1.4074	122.583	1.4259	126.028	1.4444	129.528	1.4630	133.083	29
30	1.4074	122.111	1.4259	125.528	1.4444	129.000	1.4630	132.528	1.4815	136.111	30
31	1.4259	125.083	1.4444	128.528	1.4630	132.028	1.4815	135.583	1.5000	139.194	31
32	1.4444	128.111	1.4630	131.583	1.4815	135.111	1.5000	138.694	1.5185	142.333	32
33	1.4630	131.194	1.4815	134.694	1.5000	138.250	1.5185	141.861	1.5370	145.528	33
34	1.4815	134.333	1.5000	137.861	1.5185	141.444	1.5370	145.083	1.5556	148.778	34
35	1.5000	137.528	1.5185	141.083	1.5370	144.694	1.5556	148.361	1.5741	152.083	35
36	1.5185	140.778	1.5370	144.361	1.5556	148.000	1.5741	151.694	1.5926	155.444	36
37	1.5370	144.083	1.5556	147.694	1.5741	151.361	1.5926	155.083	1.6111	158.861	37
38	1.5556	147.444	1.5741	151.083	1.5926	154.778	1.6111	158.528	1.6296	162.333	38
39	1.5741	150.861	1.5926	154.528	1.6111	158.250	1.6296	162.028	1.6481	165.861	39
40	1.5926	154.333	1.6111	158.028	1.6296	161.778	1.6481	165.583	1.6667	169.444	40
41	1.6111	157.861	1.6296	161.583	1.6481	165.361	1.6667	169.194	1.6852	173.083	41
42	1.6296	161.444	1.6481	165.194	1.6667	169.000	1.6852	172.861	1.7037	176.778	42
43	1.6481	165.083	1.6667	168.861	1.6852	172.694	1.7037	176.583	1.7222	180.528	43
44	1.6667	168.778	1.6852	172.583	1.7037	176.444	1.7222	180.361	1.7407	184.333	44
45	1.6852	172.528	1.7037	176.361	1.7222	180.250	1.7407	184.194	1.7593	188.194	45
46	1.7037	176.333	1.7222	180.194	1.7407	184.111	1.7593	188.083	1.7778	192.111	46
47	1.7222	180.194	1.7407	184.083	1.7593	188.028	1.7778	192.028	1.7963	196.083	47
48	1.7407	184.111	1.7593	188.028	1.7778	192.000	1.7963	196.028	1.8148	200.111	48
49	1.7593	188.083	1.7778	192.028	1.7963	196.028	1.8148	200.083	1.8333	204.194	49
50	1.7778	192.111	1.7963	196.083	1.8148	200.111	1.8333	204.194	1.8519	208.333	50
	46		47		48		49		50		

TABLE XXXI.—BASE 1—SLOPES $2\frac{1}{2}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.031	.0370	0.123	.0556	0.278	.0741	0.494	.0926	0.772	0
1	.0370	0.093	.0556	0.216	.0741	0.401	.0926	0.648	.1111	0.957	1
2	.0556	0.216	.0741	0.370	.0926	0.586	.1111	0.864	.1296	1.204	2
3	.0741	0.401	.0926	0.586	.1111	0.853	.1296	1.142	.1481	1.512	3
4	.0926	0.648	.1111	0.864	.1296	1.142	.1481	1.481	.1667	1.883	4
5	.1111	0.957	.1296	1.204	.1481	1.512	.1667	1.883	.1852	2.315	5
6	.1296	1.327	.1481	1.605	.1667	1.944	.1852	2.346	.2047	2.809	6
7	.1481	1.759	.1667	2.068	.1852	2.438	.2047	2.870	.2222	3.364	7
8	.1667	2.253	.1852	2.593	.2047	2.994	.2222	3.457	.2407	3.981	8
9	.1852	2.809	.2047	3.179	.2222	3.611	.2407	4.105	.2593	4.660	9
10	.2047	3.426	.2222	3.827	.2407	4.290	.2593	4.815	.2778	5.401	10
11	.2222	4.105	.2407	4.537	.2593	5.031	.2778	5.586	.2963	6.204	11
12	.2407	4.846	.2593	5.309	.2778	5.833	.2963	6.420	.3148	7.068	12
13	.2593	5.648	.2778	6.142	.2963	6.698	.3148	7.315	.3333	7.994	13
14	.2778	6.512	.2963	7.037	.3148	7.623	.3333	8.272	.3519	8.981	14
15	.2963	7.438	.3148	7.994	.3333	8.611	.3519	9.290	.3704	10.031	15
16	.3148	8.426	.3333	9.012	.3519	9.660	.3704	10.370	.3889	11.142	16
17	.3333	9.475	.3519	10.093	.3704	10.772	.3889	11.512	.4074	12.315	17
18	.3519	10.586	.3704	11.235	.3889	11.944	.4074	12.716	.4259	13.549	18
19	.3704	11.759	.3889	12.438	.4074	13.179	.4259	13.981	.4444	14.846	19
20	.3889	12.994	.4074	13.704	.4259	14.475	.4444	15.309	.4630	16.204	20
21	.4074	14.290	.4259	15.031	.4444	15.833	.4630	16.698	.4815	17.623	21
22	.4259	15.648	.4444	16.420	.4630	17.253	.4815	18.148	.5000	19.105	22
23	.4444	17.068	.4630	17.870	.4815	18.735	.5000	19.660	.5185	20.648	23
24	.4630	18.549	.4815	19.383	.5000	20.278	.5185	21.235	.5370	22.253	24
25	.4815	20.093	.5000	20.957	.5185	21.883	.5370	22.870	.5556	23.920	25
26	.5000	21.698	.5185	22.593	.5370	23.549	.5556	24.568	.5741	25.648	26
27	.5185	23.364	.5370	24.290	.5556	25.278	.5741	26.327	.5926	27.438	27
28	.5370	25.093	.5556	26.049	.5741	27.068	.5926	28.148	.6111	29.290	28
29	.5556	26.883	.5741	27.870	.5926	28.920	.6111	30.031	.6296	31.204	29
30	.5741	28.735	.5926	29.753	.6111	30.833	.6296	31.975	.6481	33.179	30
31	.5926	30.648	.6111	31.698	.6296	32.809	.6481	33.981	.6667	35.216	31
32	.6111	32.623	.6296	33.704	.6481	34.846	.6667	36.049	.6852	37.315	32
33	.6296	34.660	.6481	35.772	.6667	36.944	.6852	38.179	.7037	39.475	33
34	.6481	36.759	.6667	37.901	.6852	39.105	.7037	40.370	.7222	41.698	34
35	.6667	38.920	.6852	40.093	.7037	41.327	.7222	42.623	.7407	43.981	35
36	.6852	41.142	.7037	42.346	.7222	43.611	.7407	44.938	.7593	46.327	36
37	.7037	43.426	.7222	44.660	.7407	45.957	.7593	47.315	.7778	48.735	37
38	.7222	45.772	.7407	47.037	.7593	48.364	.7778	49.753	.7963	51.204	38
39	.7407	48.179	.7593	49.475	.7778	50.833	.7963	52.253	.8148	53.735	39
40	.7593	50.648	.7778	51.975	.7963	53.364	.8148	54.815	.8333	56.327	40
41	.7778	53.179	.7963	54.537	.8148	55.957	.8333	57.438	.8519	58.981	41
42	.7963	55.772	.8148	57.160	.8333	58.611	.8519	60.123	.8704	61.698	42
43	.8148	58.426	.8333	59.846	.8519	61.327	.8704	62.870	.8889	64.475	43
44	.8333	61.142	.8519	62.593	.8704	64.105	.8889	65.679	.9074	67.315	44
45	.8519	63.920	.8704	65.401	.8889	66.944	.9074	68.549	.9259	70.216	45
46	.8704	66.759	.8889	68.272	.9074	69.846	.9259	71.481	.9444	73.179	46
47	.8889	69.660	.9074	71.204	.9259	72.809	.9444	74.475	.9630	76.204	47
48	.9074	72.623	.9259	74.198	.9444	75.838	.9630	77.531	.9815	79.290	48
49	.9259	75.648	.9444	77.253	.9630	78.920	.9815	80.648	1.0000	82.438	49
50	.9444	78.735	.9630	80.370	.9815	82.068	1.0000	83.827	1.0185	85.648	50
	1		2		3		4		5		

TABLE XXXI.—BASE 1—SLOPES 2½ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	1.111	.1296	1.512	.1481	1.975	.1667	2.500	.1852	3.086	0
1	.1296	1.327	.1481	1.759	.1667	2.253	.1852	2.809	.2047	3.426	1
2	.1481	1.605	.1667	2.068	.1852	2.593	.2047	3.179	.2222	3.827	2
3	.1667	1.944	.1852	2.438	.2047	2.994	.2222	3.611	.2407	4.290	3
4	.1852	2.346	.2047	2.870	.2222	3.457	.2407	4.105	.2593	4.815	4
5	.2047	2.809	.2222	3.364	.2407	3.981	.2593	4.660	.2778	5.401	5
6	.2222	3.333	.2407	3.920	.2593	4.568	.2778	5.278	.2963	6.049	6
7	.2407	3.920	.2593	4.537	.2778	5.216	.2963	5.957	.3148	6.759	7
8	.2593	4.568	.2778	5.216	.2963	5.926	.3148	6.698	.3333	7.531	8
9	.2778	5.278	.2963	5.957	.3148	6.698	.3333	7.500	.3519	8.364	9
10	.2963	6.049	.3148	6.759	.3333	7.531	.3519	8.364	.3704	9.259	10
11	.3148	6.883	.3333	7.623	.3519	8.426	.3704	9.290	.3889	10.216	11
12	.3333	7.778	.3519	8.549	.3704	9.383	.3889	10.278	.4074	11.235	12
13	.3519	8.735	.3704	9.537	.3889	10.401	.4074	11.327	.4259	12.315	13
14	.3704	9.753	.3889	10.586	.4074	11.481	.4259	12.438	.4444	13.457	14
15	.3889	10.833	.4074	11.698	.4259	12.623	.4444	13.611	.4630	14.660	15
16	.4074	11.975	.4259	12.870	.4444	13.827	.4630	14.846	.4815	15.926	16
17	.4259	13.179	.4444	14.105	.4630	15.093	.4815	16.142	.5000	17.253	17
18	.4444	14.444	.4630	15.401	.4815	16.420	.5000	17.500	.5185	18.642	18
19	.4630	15.772	.4815	16.759	.5000	17.809	.5185	18.920	.5370	20.093	19
20	.4815	17.160	.5000	18.179	.5185	19.259	.5370	20.401	.5556	21.605	20
21	.5000	18.611	.5185	19.660	.5370	20.772	.5556	21.944	.5741	23.179	21
22	.5185	20.123	.5370	21.204	.5556	22.346	.5741	23.549	.5926	24.815	22
23	.5370	21.698	.5556	22.809	.5741	23.981	.5926	25.216	.6111	26.512	23
24	.5556	23.333	.5741	24.475	.5926	25.679	.6111	26.944	.6296	28.272	24
25	.5741	25.031	.5926	26.204	.6111	27.438	.6296	28.735	.6481	30.093	25
26	.5926	26.790	.6111	27.994	.6296	29.259	.6481	30.586	.6667	31.975	26
27	.6111	28.611	.6296	29.846	.6481	31.142	.6667	32.500	.6852	33.920	27
28	.6296	30.494	.6481	31.759	.6667	33.086	.6852	34.475	.7037	35.926	28
29	.6481	32.438	.6667	33.735	.6852	35.093	.7037	36.512	.7222	37.994	29
30	.6667	34.444	.6852	35.772	.7037	37.160	.7222	38.611	.7407	40.123	30
31	.6852	36.512	.7037	37.870	.7222	39.290	.7407	40.772	.7593	42.315	31
32	.7037	38.642	.7222	40.031	.7407	41.481	.7593	42.994	.7778	44.568	32
33	.7222	40.833	.7407	42.253	.7593	43.735	.7778	45.278	.7963	46.883	33
34	.7407	43.086	.7593	44.537	.7778	46.049	.7963	47.623	.8148	49.259	34
35	.7593	45.401	.7778	46.883	.7963	48.426	.8148	50.031	.8333	51.698	35
36	.7778	47.778	.7963	49.290	.8148	50.864	.8333	52.500	.8519	54.198	36
37	.7963	50.216	.8148	51.759	.8333	53.364	.8519	55.031	.8704	56.759	37
38	.8148	52.716	.8333	54.290	.8519	55.926	.8704	57.623	.8889	59.383	38
39	.8333	55.278	.8519	56.883	.8704	58.549	.8889	60.278	.9074	62.068	39
40	.8519	57.901	.8704	59.537	.8889	61.235	.9074	62.994	.9259	64.815	40
41	.8704	60.586	.8889	62.253	.9074	63.981	.9259	65.772	.9444	67.623	41
42	.8889	63.333	.9074	65.031	.9259	66.790	.9444	68.611	.9630	70.494	42
43	.9074	66.142	.9259	67.870	.9444	69.660	.9630	71.512	.9815	73.426	43
44	.9259	69.012	.9444	70.772	.9630	72.593	.9815	74.475	1.0000	76.420	44
45	.9444	71.944	.9630	73.735	.9815	75.586	1.0000	77.500	1.0185	79.475	45
46	.9630	74.938	.9815	76.759	1.0000	78.642	1.0185	80.586	1.0370	82.593	46
47	.9815	77.994	1.0000	79.846	1.0185	81.759	1.0370	83.735	1.0556	85.772	47
48	1.0000	81.111	1.0185	82.994	1.0370	84.938	1.0556	86.944	1.0741	89.012	48
49	1.0185	84.290	1.0370	86.204	1.0556	88.179	1.0741	90.216	1.0926	92.315	49
50	1.0370	87.531	1.0556	89.475	1.0741	91.481	1.0926	93.549	1.1111	95.679	50
	6		7		8		9		10		

TABLE XXXI.—BASE 1—SLOPES $2\frac{1}{2}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	3.735	.2222	4.444	.2407	5.216	.2593	6.049	.2778	6.944	0
1	.2222	4.105	.2407	4.846	.2593	5.648	.2778	6.512	.2963	7.438	1
2	.2407	4.537	.2593	5.309	.2778	6.142	.2963	7.037	.3148	7.994	2
3	.2593	5.031	.2778	5.833	.2963	6.698	.3148	7.623	.3333	8.611	3
4	.2778	5.586	.2963	6.420	.3148	7.315	.3333	8.272	.3519	9.290	4
5	.2963	6.204	.3148	7.068	.3333	7.994	.3519	8.981	.3704	10.031	5
6	.3148	6.883	.3333	7.778	.3519	8.735	.3704	9.753	.3889	10.833	6
7	.3333	7.623	.3519	8.549	.3704	9.537	.3889	10.586	.4074	11.698	7
8	.3519	8.426	.3704	9.383	.3889	10.401	.4074	11.481	.4259	12.623	8
9	.3704	9.290	.3889	10.278	.4074	11.327	.4259	12.438	.4444	13.611	9
10	.3889	10.216	.4074	11.235	.4259	12.315	.4444	13.457	.4630	14.660	10
11	.4074	11.204	.4259	12.253	.4444	13.364	.4630	14.537	.4815	15.772	11
12	.4259	12.253	.4444	13.333	.4630	14.475	.4815	15.679	.5000	16.944	12
13	.4444	13.364	.4630	14.475	.4815	15.648	.5000	16.883	.5185	18.179	13
14	.4630	14.537	.4815	15.679	.5000	16.883	.5185	18.148	.5370	19.475	14
15	.4815	15.772	.5000	16.944	.5185	18.179	.5370	19.475	.5556	20.833	15
16	.5000	17.068	.5185	18.272	.5370	19.537	.5556	20.864	.5741	22.253	16
17	.5185	18.426	.5370	19.660	.5556	20.957	.5741	22.315	.5926	23.735	17
18	.5370	19.846	.5556	21.111	.5741	22.438	.5926	23.827	.6111	25.278	18
19	.5556	21.327	.5741	22.623	.5926	23.981	.6111	25.401	.6296	26.883	19
20	.5741	22.870	.5926	24.198	.6111	25.586	.6296	27.037	.6481	28.549	20
21	.5926	24.475	.6111	25.833	.6296	27.253	.6481	28.735	.6667	30.278	21
22	.6111	26.142	.6296	27.531	.6481	28.981	.6667	30.494	.6852	32.068	22
23	.6296	27.870	.6481	29.290	.6667	30.772	.6852	32.315	.7037	33.920	23
24	.6481	29.660	.6667	31.111	.6852	32.623	.7037	34.198	.7222	35.833	24
25	.6667	31.512	.6852	32.994	.7037	34.537	.7222	36.142	.7407	37.809	25
26	.6852	33.426	.7037	34.938	.7222	36.512	.7407	38.148	.7593	39.846	26
27	.7037	35.401	.7222	36.944	.7407	38.549	.7593	40.216	.7778	41.944	27
28	.7222	37.438	.7407	39.012	.7593	40.648	.7778	42.346	.7963	44.105	28
29	.7407	39.537	.7593	41.142	.7778	42.809	.7963	44.537	.8148	46.327	29
30	.7593	41.698	.7778	43.333	.7963	45.031	.8148	46.790	.8333	48.611	30
31	.7778	43.920	.7963	45.586	.8148	47.315	.8333	49.105	.8519	50.957	31
32	.7963	46.204	.8148	47.901	.8333	49.660	.8519	51.481	.8704	53.364	32
33	.8148	48.549	.8333	50.278	.8519	52.068	.8704	53.920	.8889	55.833	33
34	.8333	50.957	.8519	52.716	.8704	54.537	.8889	56.420	.9074	58.364	34
35	.8519	53.426	.8704	55.216	.8889	57.068	.9074	58.981	.9259	60.957	35
36	.8704	55.957	.8889	57.778	.9074	59.660	.9259	61.605	.9444	63.611	36
37	.8889	58.549	.9074	60.401	.9259	62.315	.9444	64.290	.9630	66.327	37
38	.9074	61.204	.9259	63.086	.9444	65.031	.9630	67.037	.9815	69.105	38
39	.9259	63.920	.9444	65.833	.9630	67.809	.9815	69.846	1.0000	71.944	39
40	.9444	66.698	.9630	68.642	.9815	70.648	1.0000	72.716	1.0185	74.846	40
41	.9630	69.537	.9815	71.512	1.0000	73.549	1.0185	75.648	1.0370	77.809	41
42	.9815	72.438	1.0000	74.444	1.0185	76.512	1.0370	78.642	1.0556	80.833	42
43	1.0000	75.401	1.0185	77.438	1.0370	79.537	1.0556	81.698	1.0741	83.920	43
44	1.0185	78.426	1.0370	80.494	1.0556	82.623	1.0741	84.815	1.0926	87.068	44
45	1.0370	81.512	1.0556	83.611	1.0741	85.772	1.0926	87.994	1.1111	90.278	45
46	1.0556	84.660	1.0741	86.790	1.0926	88.981	1.1111	91.235	1.1296	93.549	46
47	1.0741	87.870	1.0926	90.031	1.1111	92.253	1.1296	94.537	1.1481	96.883	47
48	1.0926	91.142	1.1111	93.333	1.1296	95.586	1.1481	97.901	1.1667	100.278	48
49	1.1111	94.475	1.1296	96.698	1.1481	98.981	1.1667	101.327	1.1852	103.735	49
50	1.1296	97.870	1.1481	100.123	1.1667	102.438	1.1852	104.815	1.2047	107.253	50
	11		12		13		14		15		

TABLE XXXI.—BASE 1—SLOPES 2½ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	7.901	.3148	8.920	.3333	10.000	.3519	11.142	.3704	12.346	0
1	.3148	8.426	.3333	9.475	.3519	10.586	.3704	11.759	.3889	12.994	1
2	.3333	9.012	.3519	10.093	.3704	11.235	.3889	12.438	.4074	13.704	2
3	.3519	9.660	.3704	10.772	.3889	11.944	.4074	13.179	.4259	14.475	3
4	.3704	10.370	.3889	11.512	.4074	12.716	.4259	13.981	.4444	15.309	4
5	.3889	11.142	.4074	12.315	.4259	13.549	.4444	14.846	.4630	16.204	5
6	.4074	11.975	.4259	13.179	.4444	14.444	.4630	15.772	.4815	17.160	6
7	.4259	12.870	.4444	14.105	.4630	15.401	.4815	16.759	.5000	18.179	7
8	.4444	13.827	.4630	15.093	.4815	16.420	.5000	17.809	.5185	19.259	8
9	.4630	14.846	.4815	16.142	.5000	17.500	.5185	18.920	.5370	20.401	9
10	.4815	15.926	.5000	17.253	.5185	18.642	.5370	20.093	.5556	21.605	10
11	.5000	17.068	.5185	18.426	.5370	19.846	.5556	21.327	.5741	22.870	11
12	.5185	18.272	.5370	19.660	.5556	21.111	.5741	22.623	.5926	24.198	12
13	.5370	19.537	.5556	20.957	.5741	22.438	.5926	23.981	.6111	25.586	13
14	.5556	20.864	.5741	22.315	.5926	23.827	.6111	25.401	.6296	27.037	14
15	.5741	22.253	.5926	23.735	.6111	25.278	.6296	26.883	.6481	28.549	15
16	.5926	23.704	.6111	25.216	.6296	26.790	.6481	28.426	.6667	30.123	16
17	.6111	25.216	.6296	26.759	.6481	28.364	.6667	30.031	.6852	31.759	17
18	.6296	26.790	.6481	28.364	.6667	30.000	.6852	31.698	.7037	33.457	18
19	.6481	28.426	.6667	30.031	.6852	31.698	.7037	33.426	.7222	35.216	19
20	.6667	30.123	.6852	31.759	.7037	33.457	.7222	35.216	.7407	37.037	20
21	.6852	31.883	.7037	33.549	.7222	35.278	.7407	37.068	.7593	38.920	21
22	.7037	33.704	.7222	35.401	.7407	37.160	.7593	38.981	.7778	40.864	22
23	.7222	35.586	.7407	37.315	.7593	39.105	.7778	40.957	.7963	42.870	23
24	.7407	37.531	.7593	39.290	.7778	41.111	.7963	42.994	.8148	44.938	24
25	.7593	39.537	.7778	41.327	.7963	43.179	.8148	45.093	.8333	47.068	25
26	.7778	41.605	.7963	43.426	.8148	45.309	.8333	47.253	.8519	49.259	26
27	.7963	43.735	.8148	45.586	.8333	47.500	.8519	49.475	.8704	51.512	27
28	.8148	45.926	.8333	47.809	.8519	49.753	.8704	51.759	.8889	53.827	28
29	.8333	48.179	.8519	50.093	.8704	52.068	.8889	54.105	.9074	56.204	29
30	.8519	50.494	.8704	52.438	.8889	54.444	.9074	56.512	.9259	58.642	30
31	.8704	52.870	.8889	54.846	.9074	56.883	.9259	58.981	.9444	61.142	31
32	.8889	55.309	.9074	57.315	.9259	59.383	.9444	61.512	.9630	63.704	32
33	.9074	57.809	.9259	59.846	.9444	61.944	.9630	64.105	.9815	66.327	33
34	.9259	60.370	.9444	62.438	.9630	64.568	.9815	66.759	1.0000	69.012	34
35	.9444	62.994	.9630	65.093	.9815	67.253	1.0000	69.475	1.0185	71.759	35
36	.9630	65.679	.9815	67.809	1.0000	70.000	1.0185	72.253	1.0370	74.568	36
37	.9815	68.426	1.0000	70.586	1.0185	72.809	1.0370	75.093	1.0556	77.438	37
38	1.0000	71.235	1.0185	73.426	1.0370	75.679	1.0556	77.994	1.0741	80.370	38
39	1.0185	74.105	1.0370	76.327	1.0556	78.611	1.0741	80.957	1.0926	83.364	39
40	1.0370	77.037	1.0556	79.290	1.0741	81.605	1.0926	83.981	1.1111	86.420	40
41	1.0556	80.031	1.0741	82.315	1.0926	84.660	1.1111	87.068	1.1296	89.537	41
42	1.0741	83.086	1.0926	85.401	1.1111	87.778	1.1296	90.216	1.1481	92.716	42
43	1.0926	86.204	1.1111	88.549	1.1296	90.957	1.1481	93.426	1.1667	95.957	43
44	1.1111	89.383	1.1296	91.759	1.1481	94.198	1.1667	96.698	1.1852	99.259	44
45	1.1296	92.623	1.1481	95.031	1.1667	97.500	1.1852	100.031	1.2047	102.623	45
46	1.1481	95.926	1.1667	98.364	1.1852	100.864	1.2047	103.426	1.2222	106.049	46
47	1.1667	99.290	1.1852	101.759	1.2047	104.290	1.2222	106.883	1.2407	109.537	47
48	1.1852	102.716	1.2047	105.216	1.2222	107.778	1.2407	110.401	1.2593	113.086	48
49	1.2047	106.204	1.2222	108.735	1.2407	111.327	1.2593	113.981	1.2778	116.698	49
50	1.2222	109.753	1.2407	112.315	1.2593	114.938	1.2778	117.623	1.2963	120.370	50
	16		17		18		19		20		

TABLE XXXI.—BASE 1—SLOPES $2\frac{1}{2}$ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	13.611	.4074	14.938	.4259	16.327	.4444	17.778	.4630	19.290	0
1	.4074	14.290	.4259	15.648	.4444	17.068	.4630	18.549	.4815	20.093	1
2	.4259	15.031	.4444	16.420	.4630	17.870	.4815	19.383	.5000	20.957	2
3	.4444	15.833	.4630	17.253	.4815	18.735	.5000	20.278	.5185	21.883	3
4	.4630	16.698	.4815	18.148	.5000	19.660	.5185	21.235	.5370	22.870	4
5	.4815	17.623	.5000	19.105	.5185	20.648	.5370	22.253	.5556	23.920	5
6	.5000	18.611	.5185	20.123	.5370	21.698	.5556	23.333	.5741	25.031	6
7	.5185	19.660	.5370	21.204	.5556	22.809	.5741	24.475	.5926	26.204	7
8	.5370	20.772	.5556	22.346	.5741	23.981	.5926	25.679	.6111	27.438	8
9	.5556	21.944	.5741	23.549	.5926	25.216	.6111	26.944	.6296	28.735	9
10	.5741	23.179	.5926	24.815	.6111	26.512	.6296	28.272	.6481	30.093	10
11	.5926	24.475	.6111	26.142	.6296	27.870	.6481	29.660	.6667	31.512	11
12	.6111	25.833	.6296	27.531	.6481	29.290	.6667	31.111	.6852	32.994	12
13	.6296	27.253	.6481	28.981	.6667	30.772	.6852	32.623	.7037	34.537	13
14	.6481	28.735	.6667	30.494	.6852	32.315	.7037	34.198	.7222	36.142	14
15	.6667	30.278	.6852	32.068	.7037	33.920	.7222	35.833	.7407	37.809	15
16	.6852	31.883	.7037	33.704	.7222	35.586	.7407	37.531	.7593	39.537	16
17	.7037	33.549	.7222	35.401	.7407	37.315	.7593	39.290	.7778	41.327	17
18	.7222	35.278	.7407	37.160	.7593	39.105	.7778	41.111	.7963	43.179	18
19	.7407	37.068	.7593	38.981	.7778	40.957	.7963	42.994	.8148	45.093	19
20	.7593	38.920	.7778	40.864	.7963	42.870	.8148	44.938	.8333	47.068	20
21	.7778	40.833	.7963	42.809	.8148	44.846	.8333	46.944	.8519	49.105	21
22	.7963	42.809	.8148	44.815	.8333	46.883	.8519	49.012	.8704	51.204	22
23	.8148	44.846	.8333	46.883	.8519	48.981	.8704	51.142	.8889	53.364	23
24	.8333	46.944	.8519	49.012	.8704	51.142	.8889	53.333	.9074	55.586	24
25	.8519	49.105	.8704	51.204	.8889	53.364	.9074	55.586	.9259	57.870	25
26	.8704	51.327	.8889	53.457	.9074	55.648	.9259	57.901	.9444	60.216	26
27	.8889	53.611	.9074	55.772	.9259	57.994	.9444	60.278	.9630	62.623	27
28	.9074	55.957	.9259	58.148	.9444	60.401	.9630	62.716	.9815	65.093	28
29	.9259	58.364	.9444	60.586	.9630	62.870	.9815	65.216	1.0000	67.623	29
30	.9444	60.833	.9630	63.086	.9815	65.401	1.0000	67.778	1.0185	70.216	30
31	.9630	63.364	.9815	65.648	1.0000	67.994	1.0185	70.401	1.0370	72.870	31
32	.9815	65.957	1.0000	68.272	1.0185	70.648	1.0370	73.086	1.0556	75.586	32
33	1.0000	68.611	1.0185	70.957	1.0370	73.364	1.0556	75.833	1.0741	78.364	33
34	1.0185	71.327	1.0370	73.704	1.0556	76.142	1.0741	78.642	1.0926	81.204	34
35	1.0370	74.105	1.0556	76.512	1.0741	78.981	1.0926	81.512	1.1111	84.105	35
36	1.0556	76.944	1.0741	79.383	1.0926	81.883	1.1111	84.444	1.1296	87.068	36
37	1.0741	79.846	1.0926	82.315	1.1111	84.846	1.1296	87.438	1.1481	90.093	37
38	1.0926	82.809	1.1111	85.309	1.1296	87.870	1.1481	90.494	1.1667	93.179	38
39	1.1111	85.833	1.1296	88.364	1.1481	90.957	1.1667	93.611	1.1852	96.327	39
40	1.1296	88.920	1.1481	91.481	1.1667	94.105	1.1852	96.790	1.2047	99.537	40
41	1.1481	92.068	1.1667	94.660	1.1852	97.315	1.2047	100.031	1.2222	102.809	41
42	1.1667	95.278	1.1852	97.901	1.2047	100.586	1.2222	103.333	1.2407	106.142	42
43	1.1852	98.549	1.2047	101.204	1.2222	103.920	1.2407	106.698	1.2593	109.537	43
44	1.2047	101.883	1.2222	104.568	1.2407	107.315	1.2593	110.123	1.2778	112.994	44
45	1.2222	105.278	1.2407	107.994	1.2593	110.772	1.2778	113.611	1.2963	116.512	45
46	1.2407	108.735	1.2593	111.481	1.2778	114.290	1.2963	117.160	1.3148	120.093	46
47	1.2593	112.253	1.2778	115.031	1.2963	117.870	1.3148	120.772	1.3333	123.735	47
48	1.2778	115.833	1.2963	118.642	1.3148	121.512	1.3333	124.444	1.3519	127.438	48
49	1.2963	119.475	1.3148	122.315	1.3333	125.216	1.3519	128.179	1.3704	131.204	49
50	1.3148	123.179	1.3333	126.049	1.3519	128.981	1.3704	131.975	1.3889	135.031	50
	21		22		23		24		25		

TABLE XXXI.—BASE 1—SLOPES $2\frac{1}{2}$ to 1.

	26		27		28		29		30		
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Feet.
0	.4815	20.864	.5000	22.500	.5185	24.198	.5370	25.957	.5556	27.778	0
1	.5000	21.698	.5185	23.364	.5370	25.093	.5556	26.883	.5741	28.735	1
2	.5185	22.593	.5370	24.290	.5556	26.049	.5741	27.870	.5926	29.753	2
3	.5370	23.549	.5556	25.278	.5741	27.068	.5926	28.920	.6111	30.833	3
4	.5556	24.568	.5741	26.327	.5926	28.148	.6111	30.031	.6296	31.975	4
5	.5741	25.648	.5926	27.438	.6111	29.290	.6296	31.204	.6481	33.179	5
6	.5926	26.790	.6111	28.611	.6296	30.494	.6481	32.438	.6667	34.444	6
7	.6111	27.994	.6296	29.846	.6481	31.759	.6667	33.735	.6852	35.772	7
8	.6296	29.259	.6481	31.142	.6667	33.086	.6852	35.093	.7037	37.160	8
9	.6481	30.586	.6667	32.500	.6852	34.475	.7037	36.512	.7222	38.611	9
0	.6667	31.975	.6852	33.920	.7037	35.926	.7222	37.994	.7407	40.123	10
1	.6852	33.426	.7037	35.401	.7222	37.438	.7407	39.537	.7593	41.698	11
2	.7037	34.938	.7222	36.944	.7407	39.012	.7593	41.142	.7778	43.333	12
3	.7222	36.512	.7407	38.549	.7593	40.648	.7778	42.809	.7963	45.031	13
4	.7407	38.148	.7593	40.216	.7778	42.346	.7963	44.537	.8148	46.790	14
5	.7593	39.846	.7778	41.944	.7963	44.105	.8148	46.327	.8333	48.611	15
6	.7778	41.605	.7963	43.735	.8148	45.926	.8333	48.179	.8519	50.494	16
7	.7963	43.426	.8148	45.586	.8333	47.809	.8519	50.093	.8704	52.438	17
8	.8148	45.309	.8333	47.500	.8519	49.753	.8704	52.068	.8889	54.444	18
9	.8333	47.253	.8519	49.475	.8704	51.759	.8889	54.105	.9074	56.512	19
0	.8519	49.259	.8704	51.512	.8889	53.827	.9074	56.204	.9259	58.642	20
1	.8704	51.327	.8889	53.611	.9074	55.957	.9259	58.364	.9444	60.833	21
2	.8889	53.457	.9074	55.772	.9259	58.148	.9444	60.586	.9630	63.086	22
3	.9074	55.648	.9259	57.994	.9444	60.401	.9630	62.870	.9815	65.401	23
4	.9259	57.901	.9444	60.278	.9630	62.716	.9815	65.216	1.0000	67.778	24
5	.9444	60.216	.9630	62.623	.9815	65.093	1.0000	67.623	1.0185	70.216	25
6	.9630	62.593	.9815	65.031	1.0000	67.531	1.0185	70.093	1.0370	72.716	26
7	.9815	65.031	1.0000	67.500	1.0185	70.031	1.0370	72.623	1.0556	75.278	27
8	1.0000	67.531	1.0185	70.031	1.0370	72.593	1.0556	75.216	1.0741	77.901	28
29	1.0185	70.093	1.0370	72.623	1.0556	75.216	1.0741	77.870	1.0926	80.586	29
30	1.0370	72.716	1.0556	75.278	1.0741	77.901	1.0926	80.586	1.1111	83.333	30
31	1.0556	75.401	1.0741	77.994	1.0926	80.648	1.1111	83.364	1.1296	86.142	31
32	1.0741	78.148	1.0926	80.772	1.1111	83.457	1.1296	86.204	1.1481	89.012	32
33	1.0926	80.957	1.1111	83.611	1.1296	86.327	1.1481	89.105	1.1667	91.944	33
34	1.1111	83.827	1.1296	86.512	1.1481	89.259	1.1667	92.068	1.1852	94.938	34
35	1.1296	86.759	1.1481	89.475	1.1667	92.253	1.1852	95.093	1.2047	97.994	35
36	1.1481	89.753	1.1667	92.500	1.1852	95.309	1.2047	98.179	1.2222	101.111	36
37	1.1667	92.809	1.1852	95.586	1.2047	98.426	1.2222	101.327	1.2407	104.290	37
38	1.1852	95.926	1.2047	98.735	1.2222	101.605	1.2407	104.537	1.2593	107.531	38
39	1.2047	99.105	1.2222	101.944	1.2407	104.846	1.2593	107.809	1.2778	110.833	39
40	1.2222	102.346	1.2407	105.216	1.2593	108.148	1.2778	111.142	1.2963	114.198	40
41	1.2407	105.648	1.2593	108.549	1.2778	111.512	1.2963	114.537	1.3148	117.623	41
42	1.2593	109.012	1.2778	111.944	1.2963	114.938	1.3148	117.994	1.3333	121.111	42
43	1.2778	112.438	1.2963	115.401	1.3148	118.426	1.3333	121.512	1.3519	124.660	43
44	1.2963	115.926	1.3148	118.920	1.3333	121.975	1.3519	125.093	1.3704	128.272	44
45	1.3148	119.475	1.3333	122.500	1.3519	125.586	1.3704	128.735	1.3889	131.944	45
46	1.3333	123.086	1.3519	126.142	1.3704	129.259	1.3889	132.438	1.4074	135.679	46
47	1.3519	126.759	1.3704	129.846	1.3889	132.994	1.4074	136.204	1.4259	139.475	47
48	1.3704	130.494	1.3889	133.611	1.4074	136.790	1.4259	140.031	1.4444	143.333	48
49	1.3889	134.290	1.4074	137.438	1.4259	140.648	1.4444	143.920	1.4630	147.253	59
50	1.4074	138.148	1.4259	141.327	1.4444	144.568	1.4630	147.870	1.4815	151.235	50
	26		27		28		29		30		

TABLE XXXI.—BASE 1—SLOPES $2\frac{1}{2}$ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	29.660	.5926	31.605	.6111	33.611	.6296	35.679	.6481	37.809	0
1	.5926	30.648	.6111	32.623	.6296	34.660	.6481	36.759	.6667	38.920	1
2	.6111	31.698	.6296	33.704	.6481	35.772	.6667	37.901	.6852	40.093	2
3	.6296	32.809	.6481	34.846	.6667	36.944	.6852	39.105	.7037	41.327	3
4	.6481	33.981	.6667	36.049	.6852	38.179	.7037	40.370	.7222	42.623	4
5	.6667	35.216	.6852	37.315	.7037	39.475	.7222	41.698	.7407	43.981	5
6	.6852	36.512	.7037	38.642	.7222	40.833	.7407	43.086	.7593	45.401	6
7	.7037	37.870	.7222	40.031	.7407	42.253	.7593	44.537	.7778	46.883	7
8	.7222	39.290	.7407	41.481	.7593	43.735	.7778	46.049	.7963	48.426	8
9	.7407	40.772	.7593	42.994	.7778	45.278	.7963	47.623	.8148	50.031	9
10	.7593	42.315	.7778	44.568	.7963	46.883	.8148	49.259	.8333	51.698	10
11	.7778	43.920	.7963	46.204	.8148	48.549	.8333	50.957	.8519	53.426	11
12	.7963	45.586	.8148	47.901	.8333	50.278	.8519	52.716	.8704	55.216	12
13	.8148	47.315	.8333	49.660	.8519	52.068	.8704	54.537	.8889	57.068	13
14	.8333	49.105	.8519	51.481	.8704	53.920	.8889	56.420	.9074	58.981	14
15	.8519	50.957	.8704	53.364	.8889	55.833	.9074	58.364	.9259	60.957	15
16	.8704	52.870	.8889	55.309	.9074	57.809	.9259	60.370	.9444	62.994	16
17	.8889	54.846	.9074	57.315	.9259	59.846	.9444	62.438	.9630	65.093	17
18	.9074	56.883	.9259	59.383	.9444	61.944	.9630	64.568	.9815	67.253	18
19	.9259	58.981	.9444	61.512	.9630	64.105	.9815	66.759	1.0000	69.475	19
20	.9444	61.142	.9630	63.704	.9815	66.327	1.0000	69.012	1.0185	71.759	20
21	.9630	63.364	.9815	65.957	1.0000	68.611	1.0185	71.327	1.0370	74.105	21
22	.9815	65.648	1.0000	68.272	1.0185	70.957	1.0370	73.704	1.0556	76.512	22
23	1.0000	67.994	1.0185	70.648	1.0370	73.364	1.0556	76.142	1.0741	78.981	23
24	1.0185	70.401	1.0370	73.086	1.0556	75.833	1.0741	78.642	1.0926	81.512	24
25	1.0370	72.870	1.0556	75.586	1.0741	78.364	1.0926	81.204	1.1111	84.105	25
26	1.0556	75.401	1.0741	78.148	1.0926	80.957	1.1111	83.827	1.1296	86.759	26
27	1.0741	77.994	1.0926	80.772	1.1111	83.611	1.1296	86.512	1.1481	89.475	27
28	1.0926	80.648	1.1111	83.457	1.1296	86.327	1.1481	89.259	1.1667	92.253	28
29	1.1111	83.364	1.1296	86.204	1.1481	89.105	1.1667	92.068	1.1852	95.093	29
30	1.1296	86.142	1.1481	89.012	1.1667	91.944	1.1852	94.938	1.2047	97.994	30
31	1.1481	88.981	1.1667	91.883	1.1852	94.846	1.2047	97.870	1.2222	100.957	31
32	1.1667	91.883	1.1852	94.815	1.2047	97.809	1.2222	100.864	1.2407	103.981	32
33	1.1852	94.846	1.2047	97.809	1.2222	100.833	1.2407	103.920	1.2593	107.068	33
34	1.2047	97.870	1.2222	100.864	1.2407	103.920	1.2593	107.037	1.2778	110.216	34
35	1.2222	100.957	1.2407	103.981	1.2593	107.068	1.2778	110.216	1.2963	113.426	35
36	1.2407	104.105	1.2593	107.160	1.2778	110.278	1.2963	113.457	1.3148	116.698	36
37	1.2593	107.315	1.2778	110.401	1.2963	113.549	1.3148	116.759	1.3333	120.031	37
38	1.2778	110.586	1.2963	113.704	1.3148	116.883	1.3333	120.123	1.3519	123.426	38
39	1.2963	113.920	1.3148	117.068	1.3333	120.278	1.3519	123.549	1.3704	126.883	39
40	1.3148	117.315	1.3333	120.494	1.3519	123.735	1.3704	127.037	1.3889	130.401	40
41	1.3333	120.772	1.3519	123.981	1.3704	127.253	1.3889	130.586	1.4074	133.981	41
42	1.3519	124.290	1.3704	127.531	1.3889	130.833	1.4074	134.198	1.4259	137.623	42
43	1.3704	127.870	1.3889	131.142	1.4074	134.475	1.4259	137.870	1.4444	141.327	43
44	1.3889	131.512	1.4074	134.815	1.4259	138.179	1.4444	141.605	1.4630	145.093	44
45	1.4074	135.216	1.4259	138.549	1.4444	141.944	1.4630	145.401	1.4815	148.920	45
46	1.4259	138.981	1.4444	142.346	1.4630	145.772	1.4815	149.259	1.5000	152.809	46
47	1.4444	142.809	1.4630	146.204	1.4815	149.660	1.5000	153.179	1.5185	156.759	47
48	1.4630	146.698	1.4815	150.123	1.5000	153.611	1.5185	157.160	1.5370	160.772	48
49	1.4815	150.648	1.5000	154.105	1.5185	157.623	1.5370	161.204	1.5556	164.846	49
50	1.5000	154.660	1.5185	158.148	1.5370	161.698	1.5556	165.309	1.5741	168.981	50
	31		32		33		34		35		

TABLE XXXI.—BASE 1—SLOPES 2½ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	40.000	.6852	42.253	.7037	44.568	.7222	46.944	.7407	49.383	0
1	.6852	41.142	.7037	43.426	.7222	45.772	.7407	48.179	.7593	50.648	1
2	.7037	42.346	.7222	44.660	.7407	47.037	.7593	49.475	.7778	51.975	2
3	.7222	43.611	.7407	45.957	.7593	48.364	.7778	50.833	.7963	53.364	3
4	.7407	44.938	.7593	47.315	.7778	49.753	.7963	52.253	.8148	54.815	4
5	.7593	46.327	.7778	48.735	.7963	51.204	.8148	53.735	.8333	56.327	5
6	.7778	47.778	.7963	50.216	.8148	52.716	.8333	55.278	.8519	57.901	6
7	.7963	49.290	.8148	51.759	.8333	54.290	.8519	56.883	.8704	59.537	7
8	.8148	50.864	.8333	53.364	.8519	55.926	.8704	58.549	.8889	61.235	8
9	.8333	52.500	.8519	55.031	.8704	57.623	.8889	60.278	.9074	62.994	9
10	.8519	54.198	.8704	56.759	.8889	59.383	.9074	62.068	.9259	64.815	10
11	.8704	55.957	.8889	58.549	.9074	61.204	.9259	63.920	.9444	66.698	11
12	.8889	57.778	.9074	60.401	.9259	63.086	.9444	65.833	.9630	68.642	12
13	.9074	59.660	.9259	62.315	.9444	65.031	.9630	67.809	.9815	70.648	13
14	.9259	61.605	.9444	64.290	.9630	67.037	.9815	69.846	1.0000	72.716	14
15	.9444	63.611	.9630	66.327	.9815	69.105	1.0000	71.944	1.0185	74.846	15
16	.9630	65.679	.9815	68.426	1.0000	71.235	1.0185	74.105	1.0370	77.037	16
17	.9815	67.809	1.0000	70.586	1.0185	73.426	1.0370	76.327	1.0556	79.290	17
18	1.0000	70.000	1.0185	72.809	1.0370	75.679	1.0556	78.611	1.0741	81.605	18
19	1.0185	72.253	1.0370	75.093	1.0556	77.994	1.0741	80.957	1.0926	83.981	19
20	1.0370	74.568	1.0556	77.438	1.0741	80.370	1.0926	83.364	1.1111	86.420	20
21	1.0556	76.944	1.0741	79.846	1.0926	82.809	1.1111	85.833	1.1296	88.920	21
22	1.0741	79.383	1.0926	82.315	1.1111	85.309	1.1296	88.364	1.1481	91.481	22
23	1.0926	81.883	1.1111	84.846	1.1296	87.870	1.1481	90.957	1.1667	94.105	23
24	1.1111	84.444	1.1296	87.438	1.1481	90.494	1.1667	93.611	1.1852	96.790	24
25	1.1296	87.068	1.1481	90.093	1.1667	93.179	1.1852	96.327	1.2047	99.537	25
26	1.1481	89.753	1.1667	92.809	1.1852	95.926	1.2047	99.105	1.2222	102.346	26
27	1.1667	92.500	1.1852	95.586	1.2047	98.735	1.2222	101.944	1.2407	105.216	27
28	1.1852	95.309	1.2047	98.426	1.2222	101.605	1.2407	104.846	1.2593	108.148	28
29	1.2047	98.179	1.2222	101.327	1.2407	104.537	1.2593	107.809	1.2778	111.142	29
30	1.2222	101.111	1.2407	104.290	1.2593	107.531	1.2778	110.833	1.2963	114.198	30
31	1.2407	104.105	1.2593	107.315	1.2778	110.586	1.2963	113.920	1.3148	117.315	31
32	1.2593	107.160	1.2778	110.401	1.2963	113.704	1.3148	117.068	1.3333	120.494	32
33	1.2778	110.278	1.2963	113.549	1.3148	116.883	1.3335	120.278	1.3519	123.735	33
34	1.2963	113.457	1.3143	116.759	1.3333	120.123	1.3519	123.549	1.3704	127.037	34
35	1.3148	116.698	1.3333	120.031	1.3519	123.426	1.3704	126.883	1.3889	130.401	35
36	1.3333	120.000	1.3519	123.364	1.3704	126.790	1.3889	130.278	1.4074	133.827	36
37	1.3519	123.364	1.3704	126.759	1.3889	130.216	1.4074	133.735	1.4259	137.315	37
38	1.3704	126.790	1.3889	130.216	1.4074	133.701	1.4259	137.253	1.4444	140.864	38
39	1.3889	130.278	1.4074	133.735	1.4259	137.253	1.4444	140.853	1.4630	144.475	39
40	1.4074	133.827	1.4259	137.315	1.4444	140.864	1.4630	144.475	1.4815	148.148	40
41	1.4259	137.438	1.4444	140.957	1.4630	144.537	1.4815	148.179	1.5000	151.885	41
42	1.4444	141.111	1.4630	144.660	1.4815	148.272	1.5000	151.944	1.5185	155.679	42
43	1.4630	144.846	1.4815	148.426	1.5000	152.068	1.5185	155.772	1.5370	159.537	43
44	1.4815	148.642	1.5000	152.253	1.5185	155.926	1.5370	159.660	1.5556	163.457	44
45	1.5000	152.500	1.5185	156.142	1.5370	159.846	1.5556	163.611	1.5741	167.438	45
46	1.5185	156.420	1.5370	160.093	1.5556	163.827	1.5741	167.623	1.5926	171.481	46
47	1.5370	160.401	1.5556	164.105	1.5741	167.870	1.5926	171.698	1.6111	175.586	47
48	1.5556	164.444	1.5741	168.179	1.5926	171.975	1.6111	175.833	1.6296	179.753	48
49	1.5741	168.549	1.5926	172.315	1.6111	176.142	1.6296	180.031	1.6481	183.981	49
50	1.5926	172.716	1.6111	176.512	1.6296	180.370	1.6481	184.290	1.6667	188.272	50
	36		37		38		39		40		

TABLE XXXI.—BASE 1—SLOPES 2½ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	51.883	.7778	54.444	.7963	57.068	.8148	59.753	.8333	62.500	0
1	.7778	53.179	.7963	55.772	.8148	58.426	.8333	61.142	.8519	63.920	1
2	.7963	54.537	.8148	57.160	.8333	59.846	.8519	62.593	.8704	65.401	2
3	.8148	55.957	.8333	58.611	.8519	61.327	.8704	64.105	.8889	66.944	3
4	.8333	57.438	.8519	60.123	.8704	62.870	.8889	65.679	.9074	68.549	4
5	.8519	58.981	.8704	61.698	.8889	64.475	.9074	67.315	.9259	70.216	5
6	.8704	60.586	.8889	63.333	.9074	66.142	.9259	69.012	.9444	71.944	6
7	.8889	62.253	.9074	65.031	.9259	67.870	.9444	70.772	.9630	73.735	7
8	.9074	63.981	.9259	66.790	.9444	69.660	.9630	72.593	.9815	75.586	8
9	.9259	65.772	.9444	68.611	.9630	71.512	.9815	74.475	1.0000	77.500	9
10	.9444	67.623	.9630	70.494	.9815	73.426	1.0000	76.420	1.0185	79.475	10
11	.9630	69.537	.9815	72.438	1.0000	75.401	1.0185	78.426	1.0370	81.512	11
12	.9815	71.512	1.0000	74.444	1.0185	77.438	1.0370	80.494	1.0556	83.611	12
13	1.0000	73.549	1.0185	76.512	1.0370	79.537	1.0556	82.623	1.0741	85.772	13
14	1.0185	75.648	1.0370	78.642	1.0556	81.698	1.0741	84.815	1.0926	87.994	14
15	1.0370	77.809	1.0556	80.833	1.0741	83.920	1.0926	87.068	1.1111	90.278	15
16	1.0556	80.031	1.0741	83.086	1.0926	86.204	1.1111	89.383	1.1296	92.623	16
17	1.0741	82.315	1.0926	85.401	1.1111	88.549	1.1296	91.759	1.1481	95.031	17
18	1.0926	84.660	1.1111	87.778	1.1296	90.957	1.1481	94.198	1.1667	97.500	18
19	1.1111	87.068	1.1296	90.216	1.1481	93.426	1.1667	96.698	1.1852	100.031	19
20	1.1296	89.537	1.1481	92.716	1.1667	95.957	1.1852	99.259	1.2047	102.623	20
21	1.1481	92.068	1.1667	95.278	1.1852	98.549	1.2047	101.883	1.2222	105.278	21
22	1.1667	94.660	1.1852	97.901	1.2047	101.204	1.2222	104.568	1.2407	107.994	22
23	1.1852	97.315	1.2047	100.586	1.2222	103.920	1.2407	107.315	1.2593	110.772	23
24	1.2047	100.031	1.2222	103.333	1.2407	106.698	1.2593	110.123	1.2778	113.611	24
25	1.2222	102.809	1.2407	106.142	1.2593	109.537	1.2778	112.994	1.2965	116.512	25
26	1.2407	105.648	1.2593	109.012	1.2778	112.438	1.2963	115.926	1.3148	119.475	26
27	1.2593	108.549	1.2778	111.944	1.2963	115.401	1.3148	118.920	1.3333	122.500	27
28	1.2778	111.512	1.2963	114.938	1.3148	118.426	1.3333	121.975	1.3519	125.586	28
29	1.2963	114.537	1.3148	117.994	1.3333	121.512	1.3519	125.093	1.3704	128.735	29
30	1.3148	117.623	1.3333	121.111	1.3519	124.660	1.3704	128.272	1.3889	131.944	30
31	1.3333	120.772	1.3519	124.290	1.3704	127.870	1.3889	131.512	1.4074	135.216	31
32	1.3519	123.981	1.3704	127.531	1.3889	131.142	1.4074	134.815	1.4259	138.549	32
33	1.3704	127.253	1.3889	130.833	1.4074	134.475	1.4259	138.179	1.4444	141.944	33
34	1.3889	130.586	1.4074	134.198	1.4259	137.870	1.4444	141.605	1.4630	145.401	34
35	1.4074	133.981	1.4259	137.623	1.4444	141.327	1.4630	145.093	1.4815	148.920	35
36	1.4259	137.438	1.4444	141.111	1.4630	144.846	1.4815	148.642	1.5000	152.500	36
37	1.4444	140.957	1.4630	144.660	1.4815	148.426	1.5000	152.253	1.5185	156.142	37
38	1.4630	144.537	1.4815	148.272	1.5000	152.068	1.5185	155.926	1.5370	159.846	38
39	1.4815	148.179	1.5000	151.944	1.5185	155.772	1.5370	159.660	1.5556	163.611	39
40	1.5000	151.883	1.5185	155.679	1.5370	159.537	1.5556	163.457	1.5741	167.438	40
41	1.5185	155.648	1.5370	159.475	1.5556	163.364	1.5741	167.315	1.5926	171.327	41
42	1.5370	159.475	1.5556	163.333	1.5741	167.253	1.5926	171.235	1.6111	175.278	42
43	1.5556	163.364	1.5741	167.253	1.5926	171.204	1.6111	175.216	1.6296	179.290	43
44	1.5741	167.315	1.5926	171.235	1.6111	175.216	1.6296	179.259	1.6481	183.364	44
45	1.5926	171.327	1.6111	175.278	1.6296	179.290	1.6481	183.364	1.6667	187.500	45
46	1.6111	175.401	1.6296	179.383	1.6481	183.426	1.6667	187.531	1.6852	191.698	46
47	1.6296	179.537	1.6481	183.549	1.6667	187.623	1.6852	191.759	1.7037	195.957	47
48	1.6481	183.735	1.6667	187.778	1.6852	191.883	1.7037	196.049	1.7222	200.278	48
49	1.6667	187.994	1.6852	192.068	1.7037	196.204	1.7222	200.401	1.7407	204.660	49
50	1.6852	192.315	1.7037	196.420	1.7222	200.586	1.7407	204.815	1.7593	209.105	50
	41		42		43		44		45		

TABLE XXXI.—BASE 1—SLOPES 2½ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	65.309	.8704	68.179	.8889	71.111	.9074	74.105	.9259	77.160	0
1	.8704	66.759	.8889	69.660	.9074	72.623	.9259	75.648	.9444	78.735	1
2	.8889	68.272	.9074	71.204	.9259	74.198	.9444	77.253	.9630	80.370	2
3	.9074	69.846	.9259	72.809	.9444	75.833	.9630	78.920	.9815	82.068	3
4	.9259	71.481	.9444	74.475	.9630	77.531	.9815	80.648	1.0000	83.827	4
5	.9444	73.179	.9630	76.204	.9815	79.290	1.0000	82.438	1.0185	85.648	5
6	.9630	74.938	.9815	77.994	1.0000	81.111	1.0185	84.290	1.0370	87.531	6
7	.9815	76.759	1.0000	79.846	1.0185	82.994	1.0370	86.204	1.0556	89.475	7
8	1.0000	78.642	1.0185	81.759	1.0370	84.938	1.0556	88.179	1.0741	91.481	8
9	1.0185	80.586	1.0370	83.735	1.0556	86.944	1.0741	90.216	1.0926	93.549	9
10	1.0370	82.593	1.0556	85.772	1.0741	89.012	1.0926	92.315	1.1111	95.679	10
11	1.0556	84.660	1.0741	87.870	1.0926	91.142	1.1111	94.475	1.1296	97.870	11
12	1.0741	86.790	1.0926	90.031	1.1111	93.333	1.1296	96.698	1.1481	100.123	12
13	1.0926	88.981	1.1111	92.253	1.1296	95.586	1.1481	98.981	1.1667	102.438	13
14	1.1111	91.235	1.1296	94.537	1.1481	97.901	1.1667	101.327	1.1852	104.815	14
15	1.1296	93.549	1.1481	96.883	1.1667	100.278	1.1852	103.735	1.2047	107.253	15
16	1.1481	95.926	1.1667	99.290	1.1852	102.716	1.2047	106.204	1.2222	109.753	16
17	1.1667	98.364	1.1852	101.759	1.2047	105.216	1.2222	108.735	1.2407	112.315	17
18	1.1852	100.864	1.2047	104.290	1.2222	107.778	1.2407	111.327	1.2593	114.938	18
19	1.2047	103.426	1.2222	106.883	1.2407	110.401	1.2593	113.981	1.2778	117.623	19
20	1.2222	106.049	1.2407	109.537	1.2593	113.086	1.2778	116.698	1.2963	120.370	20
21	1.2407	108.735	1.2593	112.253	1.2778	115.833	1.2963	119.475	1.3148	123.179	21
22	1.2593	111.481	1.2778	115.031	1.2963	118.642	1.3148	122.315	1.3333	126.049	22
23	1.2778	114.290	1.2963	117.870	1.3148	121.512	1.3333	125.216	1.3519	128.981	23
24	1.2963	117.160	1.3148	120.772	1.3333	124.444	1.3519	128.179	1.3704	131.975	24
25	1.3148	120.093	1.3333	123.735	1.3519	127.438	1.3704	131.204	1.3889	135.031	25
26	1.3333	123.086	1.3519	126.759	1.3704	130.494	1.3889	134.290	1.4074	138.148	26
27	1.3519	126.142	1.3704	129.846	1.3889	133.611	1.4074	137.438	1.4259	141.327	27
28	1.3704	129.259	1.3889	132.994	1.4074	136.790	1.4259	140.648	1.4444	144.568	28
29	1.3889	132.438	1.4074	136.204	1.4259	140.031	1.4444	143.920	1.4630	147.870	29
30	1.4074	135.679	1.4259	139.475	1.4444	143.333	1.4630	147.253	1.4815	151.235	30
31	1.4259	138.981	1.4444	142.809	1.4630	146.698	1.4815	150.648	1.5000	154.660	31
32	1.4444	142.346	1.4630	146.204	1.4815	150.123	1.5000	154.105	1.5185	158.148	32
33	1.4630	145.772	1.4815	149.660	1.5000	153.611	1.5185	157.623	1.5370	161.698	33
34	1.4815	149.259	1.5000	153.179	1.5185	157.160	1.5370	161.204	1.5556	165.309	34
35	1.5000	152.809	1.5185	156.759	1.5370	160.772	1.5556	164.846	1.5741	168.981	35
36	1.5185	156.420	1.5370	160.401	1.5556	164.444	1.5741	168.549	1.5926	172.716	36
37	1.5370	160.093	1.5556	164.105	1.5741	168.179	1.5926	172.315	1.6111	176.512	37
38	1.5556	163.827	1.5741	167.870	1.5926	171.975	1.6111	176.142	1.6296	180.370	38
39	1.5741	167.623	1.5926	171.698	1.6111	175.833	1.6296	180.031	1.6481	184.290	39
40	1.5926	171.481	1.6111	175.586	1.6296	179.753	1.6481	183.981	1.6667	188.272	40
41	1.6111	175.401	1.6296	179.537	1.6481	183.735	1.6667	187.994	1.6852	192.315	41
42	1.6296	179.383	1.6481	183.549	1.6667	187.778	1.6852	192.068	1.7037	196.420	42
43	1.6481	183.426	1.6667	187.623	1.6852	191.883	1.7037	196.204	1.7222	200.586	43
44	1.6667	187.531	1.6852	191.759	1.7037	196.049	1.7222	200.401	1.7407	204.815	44
45	1.6852	191.698	1.7037	195.957	1.7222	200.278	1.7407	204.660	1.7593	209.105	45
46	1.7037	195.926	1.7222	200.216	1.7407	204.568	1.7593	208.981	1.7778	213.457	46
47	1.7222	200.216	1.7407	204.537	1.7593	208.920	1.7778	213.364	1.7963	217.870	47
48	1.7407	204.568	1.7593	208.920	1.7778	213.333	1.7963	217.809	1.8148	222.346	48
49	1.7593	208.981	1.7778	213.364	1.7963	217.809	1.8148	222.315	1.8333	226.883	49
50	1.7778	213.457	1.7963	217.870	1.8148	222.346	1.8333	226.883	1.8519	231.481	50
	46		47		48		49		50		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.034	.0370	0.136	.0556	0.306	.0741	0.543	.0926	0.849	0
1	.0370	0.102	.0556	0.238	.0741	0.441	.0926	0.713	.1111	1.052	1
2	.0556	0.238	.0741	0.407	.0926	0.645	.1111	0.951	.1296	1.324	2
3	.0741	0.441	.0926	0.645	.1111	0.917	.1296	1.256	.1481	1.664	3
4	.0926	0.713	.1111	0.951	.1296	1.256	.1481	1.630	.1667	2.071	4
5	.1111	1.052	.1296	1.324	.1481	1.664	.1667	2.071	.1852	2.546	5
6	.1296	1.460	.1481	1.765	.1667	2.139	.1852	2.580	.2047	3.090	6
7	.1481	1.935	.1667	2.275	.1852	2.682	.2047	3.157	.2222	3.701	7
8	.1667	2.478	.1852	2.852	.2047	3.293	.2222	3.802	.2407	4.380	8
9	.1852	3.090	.2047	3.497	.2222	3.972	.2407	4.515	.2593	5.127	9
10	.2047	3.769	.2222	4.210	.2407	4.719	.2593	5.296	.2778	5.941	10
11	.2222	4.515	.2407	4.991	.2593	5.534	.2778	6.145	.2963	6.824	11
12	.2407	5.330	.2593	5.840	.2778	6.417	.2963	7.062	.3148	7.775	12
13	.2593	6.213	.2778	6.756	.2963	7.367	.3148	8.046	.3333	8.793	13
14	.2778	7.164	.2963	7.741	.3148	8.386	.3333	9.099	.3519	9.880	14
15	.2963	8.182	.3148	8.793	.3333	9.472	.3519	10.219	.3704	11.034	15
16	.3148	9.269	.3333	9.914	.3519	10.627	.3704	11.407	.3889	12.256	16
17	.3333	10.423	.3519	11.102	.3704	11.849	.3889	12.664	.4074	13.546	17
18	.3519	11.645	.3704	12.358	.3889	13.139	.4074	13.988	.4259	14.904	18
19	.3704	12.935	.3889	13.682	.4074	14.497	.4259	15.380	.4444	16.330	19
20	.3889	14.293	.4074	15.074	.4259	15.923	.4444	16.840	.4630	17.824	20
21	.4074	15.719	.4259	16.534	.4444	17.417	.4630	18.367	.4815	19.386	21
22	.4259	17.213	.4444	18.062	.4630	18.978	.4815	19.963	.5000	21.015	22
23	.4444	18.775	.4630	19.657	.4815	20.608	.5000	21.627	.5185	22.713	23
24	.4630	20.404	.4815	21.321	.5000	22.306	.5185	23.358	.5370	24.478	24
25	.4815	22.102	.5000	23.052	.5185	24.071	.5370	25.157	.5556	26.312	25
26	.5000	23.867	.5185	24.852	.5370	25.904	.5556	27.025	.5741	28.213	26
27	.5185	25.701	.5370	26.719	.5556	27.806	.5741	28.960	.5926	30.182	27
28	.5370	27.602	.5556	28.654	.5741	29.775	.5926	30.963	.6111	32.219	28
29	.5556	29.571	.5741	30.657	.5926	31.812	.6111	33.034	.6296	34.324	29
30	.5741	31.608	.5926	32.728	.6111	33.917	.6296	35.173	.6481	36.497	30
31	.5926	33.713	.6111	34.867	.6296	36.090	.6481	37.380	.6667	38.738	31
32	.6111	35.886	.6296	37.074	.6481	38.330	.6667	39.654	.6852	41.046	32
33	.6296	38.127	.6481	39.349	.6667	40.639	.6852	41.997	.7037	43.423	33
34	.6481	40.435	.6667	41.691	.6852	43.015	.7037	44.407	.7222	45.867	34
35	.6667	42.812	.6852	44.102	.7037	45.460	.7222	46.886	.7407	48.380	35
36	.6852	45.256	.7037	46.580	.7222	47.972	.7407	49.432	.7593	50.960	36
37	.7037	47.769	.7222	49.127	.7407	50.552	.7593	52.046	.7778	53.608	37
38	.7222	50.349	.7407	51.741	.7593	53.201	.7778	54.728	.7963	56.324	38
39	.7407	52.997	.7593	54.423	.7778	55.917	.7963	57.478	.8148	59.108	39
40	.7593	55.713	.7778	57.173	.7963	58.701	.8148	60.296	.8333	61.960	40
41	.7778	58.497	.7963	59.991	.8148	61.552	.8333	63.182	.8519	64.880	41
42	.7963	61.349	.8148	62.877	.8333	64.472	.8519	66.136	.8704	67.867	42
43	.8148	64.269	.8333	65.830	.8519	67.460	.8704	69.157	.8889	70.923	43
44	.8333	67.256	.8519	68.852	.8704	70.515	.8889	72.247	.9074	74.046	44
45	.8519	70.312	.8704	71.941	.8889	73.639	.9074	75.404	.9259	77.238	45
46	.8704	73.435	.8889	75.099	.9074	76.830	.9259	78.630	.9444	80.497	46
47	.8889	76.627	.9074	78.324	.9259	80.090	.9444	81.923	.9630	83.824	47
48	.9074	79.886	.9259	81.617	.9444	83.417	.9630	85.284	.9815	87.219	48
49	.9259	83.213	.9444	84.978	.9630	86.812	.9815	88.713	1.0000	90.682	49
50	.9444	86.608	.9630	88.407	.9815	90.275	1.0000	92.210	1.0185	94.213	50
	1		2		3		4		5		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	1.222	.1296	1.664	.1481	2.173	.1667	2.750	.1852	3.395	0
1	.1296	1.460	.1481	1.933	.1667	2.478	.1852	3.090	.2047	3.769	1
2	.1481	1.765	.1667	2.275	.1852	2.852	.2047	3.497	.2222	4.210	2
3	.1667	2.139	.1852	2.682	.2047	3.293	.2222	3.972	.2407	4.719	3
4	.1852	2.580	.2047	3.157	.2222	3.802	.2407	4.515	.2593	5.296	4
5	.2047	3.090	.2222	3.701	.2407	4.380	.2593	5.127	.2778	5.941	5
6	.2222	3.667	.2407	4.312	.2593	5.025	.2778	5.806	.2963	6.654	6
7	.2407	4.312	.2593	4.991	.2778	5.738	.2963	6.552	.3148	7.435	7
8	.2593	5.025	.2778	5.738	.2963	6.519	.3148	7.367	.3333	8.284	8
9	.2778	5.806	.2963	6.552	.3148	7.367	.3333	8.250	.3519	9.201	9
10	.2963	6.654	.3148	7.435	.3333	8.284	.3519	9.201	.3704	10.185	10
11	.3148	7.571	.3333	8.386	.3519	9.269	.3704	10.219	.3889	11.238	11
12	.3333	8.556	.3519	9.404	.3704	10.321	.3889	11.306	.4074	12.358	12
13	.3519	9.608	.3704	10.491	.3889	11.441	.4074	12.460	.4259	13.546	13
14	.3704	10.728	.3889	11.645	.4074	12.630	.4259	13.682	.4444	14.802	14
15	.3889	11.917	.4074	12.867	.4259	13.886	.4444	14.972	.4630	16.127	15
16	.4074	13.173	.4259	14.157	.4444	15.210	.4630	16.330	.4815	17.519	16
17	.4259	14.497	.4444	15.515	.4630	16.602	.4815	17.756	.5000	18.978	17
18	.4444	15.889	.4630	16.941	.4815	18.062	.5000	19.250	.5185	20.506	18
19	.4630	17.349	.4815	18.435	.5000	19.590	.5185	20.812	.5370	22.102	19
20	.4815	18.877	.5000	19.997	.5185	21.185	.5370	22.441	.5556	23.765	20
21	.5000	20.472	.5185	21.627	.5370	22.849	.5556	24.139	.5741	25.497	21
22	.5185	22.136	.5370	23.324	.5556	24.580	.5741	25.904	.5926	27.296	22
23	.5370	23.867	.5556	25.090	.5741	26.380	.5926	27.738	.6111	29.164	23
24	.5556	25.667	.5741	26.923	.5926	28.247	.6111	29.639	.6296	31.099	24
25	.5741	27.534	.5926	28.824	.6111	30.182	.6296	31.608	.6481	33.102	25
26	.5926	29.469	.6111	30.793	.6296	32.185	.6481	33.645	.6667	35.173	26
27	.6111	31.472	.6296	32.830	.6481	34.256	.6667	35.750	.6852	37.312	27
28	.6296	33.543	.6481	34.935	.6667	36.395	.6852	37.923	.7037	39.519	28
29	.6481	35.682	.6667	37.108	.6852	38.602	.7037	40.164	.7222	41.793	29
30	.6667	37.889	.6852	39.349	.7037	40.877	.7222	42.472	.7407	44.136	30
31	.6852	40.164	.7037	41.657	.7222	43.219	.7407	44.849	.7593	46.546	31
32	.7037	42.506	.7222	44.034	.7407	45.630	.7593	47.293	.7778	49.025	32
33	.7222	44.917	.7407	46.478	.7593	48.108	.7778	49.806	.7963	51.571	33
34	.7407	47.395	.7593	48.991	.7778	50.654	.7963	52.386	.8148	54.185	34
35	.7593	49.941	.7778	51.571	.7963	53.269	.8148	55.034	.8333	56.867	35
36	.7778	52.556	.7963	54.219	.8148	55.951	.8333	57.750	.8519	59.617	36
37	.7963	55.238	.8148	56.935	.8333	58.701	.8519	60.534	.8704	62.435	37
38	.8148	57.988	.8333	59.719	.8519	61.519	.8704	63.386	.8889	65.321	38
39	.8333	60.806	.8519	62.571	.8704	64.404	.8889	66.306	.9074	68.275	39
40	.8519	63.691	.8704	65.491	.8889	67.358	.9074	69.293	.9259	71.296	40
41	.8704	66.645	.8889	68.478	.9074	70.380	.9259	72.349	.9444	74.386	41
42	.8889	69.667	.9074	71.534	.9259	73.469	.9444	75.472	.9630	77.543	42
43	.9074	72.756	.9259	74.657	.9444	76.627	.9630	78.664	.9815	80.769	43
44	.9259	75.914	.9444	77.849	.9630	79.852	.9815	81.923	1.0000	84.062	44
45	.9444	79.139	.9630	81.108	.9815	83.145	1.0000	85.250	1.0185	87.423	45
46	.9630	82.432	.9815	84.435	1.0000	86.506	1.0185	88.645	1.0370	90.852	46
47	.9815	85.793	1.0000	87.830	1.0185	89.935	1.0370	92.108	1.0556	94.349	47
48	1.0000	89.222	1.0185	91.293	1.0370	93.432	1.0556	95.639	1.0741	97.914	48
49	1.0185	92.719	1.0370	94.824	1.0556	96.997	1.0741	99.238	1.0926	101.546	49
50	1.0370	96.284	1.0556	98.423	1.0741	100.630	1.0926	102.904	1.1111	105.247	50
	6		7		8		9		10		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	4.108	.2222	4.889	.2407	5.738	.2593	6.654	.2778	7.639	0
1	.2222	4.515	.2407	5.330	.2593	6.213	.2778	7.164	.2963	8.182	1
2	.2407	4.991	.2593	5.840	.2778	6.756	.2963	7.741	.3148	8.793	2
3	.2593	5.534	.2778	6.417	.2963	7.367	.3148	8.386	.3333	9.472	3
4	.2778	6.145	.2963	7.062	.3148	8.046	.3333	9.099	.3519	10.219	4
5	.2963	6.824	.3148	7.775	.3333	8.793	.3519	9.880	.3704	11.034	5
6	.3148	7.571	.3333	8.556	.3519	9.608	.3704	10.728	.3889	11.917	6
7	.3333	8.386	.3519	9.404	.3704	10.491	.3889	11.645	.4074	12.867	7
8	.3519	9.269	.3704	10.321	.3889	11.441	.4074	12.630	.4259	13.886	8
9	.3704	10.219	.3889	11.306	.4074	12.460	.4259	13.682	.4444	14.972	9
10	.3889	11.238	.4074	12.358	.4259	13.546	.4444	14.802	.4630	16.127	10
11	.4074	12.324	.4259	13.478	.4444	14.701	.4630	15.991	.4815	17.349	11
12	.4259	13.478	.4444	14.667	.4630	15.923	.4815	17.247	.5000	18.639	12
13	.4444	14.701	.4630	15.923	.4815	17.213	.5000	18.571	.5185	19.997	13
14	.4630	15.991	.4815	17.247	.5000	18.571	.5185	19.963	.5370	21.423	14
15	.4815	17.349	.5000	18.639	.5185	19.997	.5370	21.423	.5556	22.917	15
16	.5000	18.775	.5185	20.099	.5370	21.491	.5556	22.951	.5741	24.478	16
17	.5185	20.269	.5370	21.627	.5556	23.052	.5741	24.546	.5926	26.108	17
18	.5370	21.830	.5556	23.222	.5741	24.682	.5926	26.210	.6111	27.806	18
19	.5556	23.460	.5741	24.886	.5926	26.380	.6111	27.941	.6296	29.571	19
20	.5741	25.157	.5926	26.617	.6111	28.145	.6296	29.741	.6481	31.404	20
21	.5926	26.923	.6111	28.417	.6296	29.978	.6481	31.608	.6667	33.306	21
22	.6111	28.756	.6296	30.284	.6481	31.880	.6667	33.543	.6852	35.275	22
23	.6296	30.657	.6481	32.219	.6667	33.849	.6852	35.546	.7037	37.312	23
24	.6481	32.627	.6667	34.222	.6852	35.886	.7037	37.617	.7222	39.417	24
25	.6667	34.664	.6852	36.293	.7037	37.991	.7222	39.756	.7407	41.590	25
26	.6852	36.769	.7037	38.432	.7222	40.164	.7407	41.963	.7593	43.830	26
27	.7037	38.941	.7222	40.639	.7407	42.404	.7593	44.238	.7778	46.139	27
28	.7222	41.182	.7407	42.914	.7593	44.713	.7778	46.580	.7963	48.515	28
29	.7407	43.491	.7593	45.256	.7778	47.090	.7963	48.991	.8148	50.960	29
30	.7593	45.867	.7778	47.667	.7963	49.534	.8148	51.469	.8333	53.472	30
31	.7778	48.312	.7963	50.145	.8148	52.046	.8333	54.015	.8519	56.052	31
32	.7963	50.824	.8148	52.691	.8333	54.627	.8519	56.630	.8704	58.701	32
33	.8148	53.404	.8333	55.306	.8519	57.275	.8704	59.312	.8889	61.417	33
34	.8333	56.052	.8519	57.988	.8704	59.991	.8889	62.062	.9074	64.201	34
35	.8519	58.769	.8704	60.738	.8889	62.775	.9074	64.880	.9259	67.052	35
36	.8704	61.552	.8889	63.556	.9074	65.627	.9259	67.765	.9444	69.972	36
37	.8889	64.404	.9074	66.441	.9259	68.546	.9444	70.719	.9630	72.960	37
38	.9074	67.324	.9259	69.395	.9444	71.534	.9630	73.741	.9815	76.015	38
39	.9259	70.312	.9444	72.417	.9630	74.590	.9815	76.830	1.0000	79.139	39
40	.9444	73.367	.9630	75.506	.9815	77.713	1.0000	79.988	1.0185	82.330	40
41	.9630	76.491	.9815	78.664	1.0000	80.904	1.0185	83.213	1.0370	85.590	41
42	.9815	79.682	1.0000	81.889	1.0185	84.164	1.0370	86.506	1.0556	88.917	42
43	1.0000	82.941	1.0185	85.182	1.0370	87.491	1.0556	89.867	1.0741	92.312	43
44	1.0185	86.269	1.0370	88.543	1.0556	90.886	1.0741	93.296	1.0926	95.775	44
45	1.0370	89.664	1.0556	91.972	1.0741	94.349	1.0926	96.793	1.1111	99.306	45
46	1.0556	93.127	1.0741	95.469	1.0926	97.880	1.1111	100.358	1.1296	102.904	46
47	1.0741	96.657	1.0926	99.034	1.1111	101.478	1.1296	103.991	1.1481	106.571	47
48	1.0926	100.256	1.1111	102.667	1.1296	105.145	1.1481	107.691	1.1667	110.306	48
49	1.1111	103.923	1.1296	106.367	1.1481	108.880	1.1667	111.460	1.1852	114.108	49
50	1.1296	107.657	1.1481	110.136	1.1667	112.682	1.1852	115.296	1.2047	117.978	50
	11		12		13		14		15		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	16		17		18		19		20		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2963	8.691	.3148	9.812	.3333	11.000	.3519	12.256	.3704	13.580	0
1	.3148	9.269	.3333	10.423	.3519	11.645	.3704	12.935	.3889	14.293	1
2	.3333	9.914	.3519	11.102	.3704	12.358	.3889	13.682	.4074	15.074	2
3	.3519	10.627	.3704	11.849	.3889	13.139	.4074	14.497	.4259	15.923	3
4	.3704	11.407	.3889	12.664	.4074	13.988	.4259	15.380	.4444	16.840	4
5	.3889	12.256	.4074	13.546	.4259	14.904	.4444	16.330	.4630	17.824	5
6	.4074	13.173	.4259	14.497	.4444	15.889	.4630	17.349	.4815	18.877	6
7	.4259	14.157	.4444	15.515	.4630	16.941	.4815	18.435	.5000	19.997	7
8	.4444	15.210	.4630	16.602	.4815	18.062	.5000	19.590	.5185	21.185	8
9	.4630	16.330	.4815	17.756	.5000	19.250	.5185	20.812	.5370	22.441	9
10	.4815	17.519	.5000	18.978	.5185	20.506	.5370	22.102	.5556	23.765	10
11	.5000	18.775	.5185	20.269	.5370	21.830	.5556	23.460	.5741	25.157	11
12	.5185	20.099	.5370	21.627	.5556	23.222	.5741	24.886	.5926	26.617	12
13	.5370	21.491	.5556	23.052	.5741	24.682	.5926	26.380	.6111	28.145	13
14	.5556	22.951	.5741	24.546	.5926	26.210	.6111	27.941	.6296	29.741	14
15	.5741	24.478	.5926	26.108	.6111	27.806	.6296	29.571	.6481	31.404	15
16	.5926	26.074	.6111	27.738	.6296	29.469	.6481	31.269	.6667	33.136	16
17	.6111	27.738	.6296	29.435	.6481	31.201	.6667	33.034	.6852	34.935	17
18	.6296	29.469	.6481	31.201	.6667	33.000	.6852	34.867	.7037	36.802	18
19	.6481	31.269	.6667	33.034	.6852	34.867	.7037	36.769	.7222	38.738	19
20	.6667	33.136	.6852	34.935	.7037	36.802	.7222	38.738	.7407	40.741	20
21	.6852	35.071	.7037	36.904	.7222	38.806	.7407	40.775	.7593	42.812	21
22	.7037	37.074	.7222	38.941	.7407	40.877	.7593	42.880	.7778	44.951	22
23	.7222	39.145	.7407	41.046	.7593	43.015	.7778	45.052	.7963	47.157	23
24	.7407	41.284	.7593	43.219	.7778	45.222	.7963	47.293	.8148	49.432	24
25	.7593	43.491	.7778	45.460	.7963	47.497	.8148	49.602	.8333	51.775	25
26	.7778	45.765	.7963	47.769	.8148	49.840	.8333	51.978	.8519	54.185	26
27	.7963	48.108	.8148	50.145	.8333	52.250	.8519	54.423	.8704	56.664	27
28	.8148	50.519	.8333	52.590	.8519	54.728	.8704	56.935	.8889	59.210	28
29	.8333	52.997	.8519	55.102	.8704	57.275	.8889	59.515	.9074	61.824	29
30	.8519	55.543	.8704	57.682	.8889	59.889	.9074	62.164	.9259	64.506	30
31	.8704	58.157	.8889	60.330	.9074	62.571	.9259	64.880	.9444	67.256	31
32	.8889	60.840	.9074	63.046	.9259	65.321	.9444	67.664	.9630	70.074	32
33	.9074	63.590	.9259	65.830	.9444	68.139	.9630	70.515	.9815	72.960	33
34	.9259	66.407	.9444	68.682	.9630	71.025	.9815	73.435	1.0000	75.914	34
35	.9444	69.293	.9630	71.602	.9815	73.978	1.0000	76.423	1.0185	78.935	35
36	.9630	72.247	.9815	74.590	1.0000	77.000	1.0185	79.478	1.0370	82.025	36
37	.9815	75.269	1.0000	77.645	1.0185	80.090	1.0370	82.602	1.0556	85.182	37
38	1.0000	78.358	1.0185	80.769	1.0370	83.247	1.0556	85.793	1.0741	88.407	38
39	1.0185	81.515	1.0370	83.960	1.0556	86.472	1.0741	89.052	1.0926	91.701	39
40	1.0370	84.741	1.0556	87.219	1.0741	89.765	1.0926	92.380	1.1111	95.062	40
41	1.0556	88.034	1.0741	90.546	1.0926	93.127	1.1111	95.775	1.1296	98.491	41
42	1.0741	91.395	1.0926	93.941	1.1111	96.556	1.1296	99.238	1.1481	101.988	42
43	1.0926	94.824	1.1111	97.404	1.1296	100.052	1.1481	102.769	1.1667	105.552	43
44	1.1111	98.321	1.1296	100.935	1.1481	103.617	1.1667	106.367	1.1852	109.185	44
45	1.1296	101.886	1.1481	104.534	1.1667	107.250	1.1852	110.034	1.2047	112.886	45
46	1.1481	105.519	1.1667	108.201	1.1852	110.951	1.2047	113.769	1.2222	116.654	46
47	1.1667	109.219	1.1852	111.935	1.2047	114.719	1.2222	117.571	1.2407	120.491	47
48	1.1852	112.988	1.2047	115.738	1.2222	118.556	1.2407	121.441	1.2593	124.395	48
49	1.2047	116.824	1.2222	119.608	1.2407	122.460	1.2593	125.380	1.2778	128.367	49
50	1.2222	120.728	1.2407	123.546	1.2593	126.432	1.2778	129.386	1.2963	132.407	50
	16		17		18		19		20		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	14.972	.4074	16.432	.4259	17.960	.4444	19.556	.4630	21.219	0
1	.4074	15.719	.4259	17.213	.4444	18.775	.4630	20.404	.4815	22.102	1
2	.4259	16.534	.4444	18.062	.4630	19.657	.4815	21.321	.5000	23.052	2
3	.4444	17.417	.4630	18.978	.4815	20.608	.5000	22.306	.5185	24.071	3
4	.4630	18.367	.4815	19.963	.5000	21.627	.5185	23.358	.5370	25.157	4
5	.4815	19.386	.5000	21.015	.5185	22.713	.5370	24.478	.5556	26.312	5
6	.5000	20.472	.5185	22.136	.5370	23.867	.5556	25.667	.5741	27.534	6
7	.5185	21.627	.5370	23.324	.5556	25.090	.5741	26.923	.5926	28.824	7
8	.5370	22.849	.5556	24.580	.5741	26.380	.5926	28.247	.6111	30.182	8
9	.5556	24.139	.5741	25.904	.5926	27.738	.6111	29.639	.6296	31.608	9
10	.5741	25.497	.5926	27.296	.6111	29.164	.6296	31.099	.6481	33.102	10
11	.5926	26.923	.6111	28.756	.6296	30.657	.6481	32.627	.6667	34.664	11
12	.6111	28.417	.6296	30.284	.6481	32.219	.6667	34.222	.6852	36.293	12
13	.6296	29.978	.6481	31.880	.6667	33.849	.6852	35.886	.7037	37.991	13
14	.6481	31.608	.6667	33.543	.6852	35.546	.7037	37.617	.7222	39.756	14
15	.6667	33.306	.6852	35.275	.7037	37.312	.7222	39.417	.7407	41.590	15
16	.6852	35.071	.7037	37.074	.7222	39.145	.7407	41.284	.7593	43.491	16
17	.7037	36.904	.7222	38.941	.7407	41.046	.7593	43.219	.7778	45.460	17
18	.7222	38.806	.7407	40.877	.7593	43.015	.7778	45.222	.7963	47.497	18
19	.7407	40.775	.7593	42.880	.7778	45.052	.7963	47.293	.8148	49.602	19
20	.7593	42.812	.7778	44.951	.7963	47.157	.8148	49.432	.8333	51.775	20
21	.7778	44.917	.7963	47.090	.8148	49.330	.8333	51.639	.8519	54.015	21
22	.7963	47.090	.8148	49.296	.8333	51.571	.8519	53.914	.8704	56.324	22
23	.8148	49.330	.8333	51.571	.8519	53.880	.8704	56.256	.8889	58.701	23
24	.8333	51.639	.8519	53.914	.8704	56.256	.8889	58.667	.9074	61.145	24
25	.8519	54.015	.8704	56.324	.8889	58.701	.9074	61.145	.9259	63.657	25
26	.8704	56.460	.8889	58.802	.9074	61.213	.9259	63.691	.9444	66.238	26
27	.8889	58.972	.9074	61.349	.9259	63.793	.9444	66.306	.9630	68.886	27
28	.9074	61.552	.9259	63.963	.9444	66.441	.9630	68.988	.9815	71.602	28
29	.9259	64.201	.9444	66.645	.9630	69.157	.9815	71.738	1.0000	74.386	29
30	.9444	66.917	.9630	69.395	.9815	71.941	1.0000	74.556	1.0185	77.238	30
31	.9630	69.701	.9815	72.213	1.0000	74.793	1.0185	77.441	1.0370	80.157	31
32	.9815	72.552	1.0000	75.099	1.0185	77.713	1.0370	80.395	1.0556	83.145	32
33	1.0000	75.472	1.0185	78.052	1.0370	80.701	1.0556	83.417	1.0741	86.201	33
34	1.0185	78.460	1.0370	81.074	1.0556	83.756	1.0741	86.506	1.0926	89.324	34
35	1.0370	81.515	1.0556	84.164	1.0741	86.880	1.0926	89.664	1.1111	92.515	35
36	1.0556	84.639	1.0741	87.321	1.0926	90.071	1.1111	92.889	1.1296	95.775	36
37	1.0741	87.830	1.0926	90.546	1.1111	93.330	1.1296	96.182	1.1481	99.102	37
38	1.0926	91.090	1.1111	93.840	1.1296	96.657	1.1481	99.543	1.1667	102.497	38
39	1.1111	94.417	1.1296	97.201	1.1481	100.052	1.1667	102.972	1.1852	105.960	39
40	1.1296	97.812	1.1481	100.630	1.1667	103.515	1.1852	106.469	1.2047	109.491	40
41	1.1481	101.275	1.1667	104.127	1.1852	107.046	1.2047	110.034	1.2222	113.090	41
42	1.1667	104.806	1.1852	107.691	1.2047	110.645	1.2222	113.667	1.2407	116.756	42
43	1.1852	108.404	1.2047	111.324	1.2222	114.312	1.2407	117.367	1.2593	120.491	43
44	1.2047	112.071	1.2222	115.025	1.2407	118.046	1.2593	121.156	1.2778	124.293	44
45	1.2222	115.806	1.2407	118.793	1.2593	121.849	1.2778	124.972	1.2963	128.164	45
46	1.2407	119.608	1.2593	122.630	1.2778	125.719	1.2963	128.877	1.3148	132.102	46
47	1.2593	123.478	1.2778	126.534	1.2963	129.657	1.3148	132.849	1.3333	136.108	47
48	1.2778	127.417	1.2963	130.506	1.3148	133.664	1.3333	136.889	1.3519	140.182	48
49	1.2963	131.423	1.3148	134.546	1.3333	137.738	1.3519	140.997	1.3704	144.324	49
50	1.3148	135.497	1.3333	138.654	1.3519	141.880	1.3704	145.173	1.3889	148.534	50
	21		22		23		24		25		

TABLE XXXII.—BASE 1—SLOPES 2½ to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	22.951	.5000	24.750	.5185	26.617	.5370	28.552	.5556	30.556	0
1	.5000	23.867	.5185	25.701	.5370	27.602	.5556	29.571	.5741	31.608	1
2	.5185	24.852	.5370	26.719	.5556	28.654	.5741	30.657	.5926	32.728	2
3	.5370	25.904	.5556	27.806	.5741	29.775	.5926	31.812	.6111	33.917	3
4	.5556	27.025	.5741	28.960	.5926	30.963	.6111	33.034	.6296	35.173	4
5	.5741	28.213	.5926	30.182	.6111	32.219	.6296	34.324	.6481	36.497	5
6	.5926	29.469	.6111	31.472	.6296	33.543	.6481	35.682	.6667	37.889	6
7	.6111	30.793	.6296	32.830	.6481	34.935	.6667	37.108	.6852	39.349	7
8	.6296	32.185	.6481	34.256	.6667	36.395	.6852	38.602	.7037	40.877	8
9	.6481	33.645	.6667	35.750	.6852	37.923	.7037	40.164	.7222	42.472	9
10	.6667	35.173	.6852	37.312	.7037	39.519	.7222	41.793	.7407	44.136	10
11	.6852	36.769	.7037	38.941	.7222	41.182	.7407	43.491	.7593	45.867	11
12	.7037	38.432	.7222	40.639	.7407	42.914	.7593	45.256	.7778	47.667	12
13	.7222	40.164	.7407	42.404	.7593	44.713	.7778	47.090	.7963	49.534	13
14	.7407	41.963	.7593	44.238	.7778	46.580	.7963	48.991	.8148	51.469	14
15	.7593	43.830	.7778	46.139	.7963	48.515	.8148	50.960	.8333	53.472	15
16	.7778	45.765	.7963	48.108	.8148	50.519	.8333	52.997	.8519	55.543	16
17	.7963	47.769	.8148	50.145	.8333	52.590	.8519	55.102	.8704	57.682	17
18	.8148	49.840	.8333	52.250	.8519	54.728	.8704	57.275	.8889	59.889	18
19	.8333	51.978	.8519	54.423	.8704	56.935	.8889	59.515	.9074	62.164	19
20	.8519	54.185	.8704	56.664	.8889	59.210	.9074	61.824	.9259	64.506	20
21	.8704	56.460	.8889	58.972	.9074	61.552	.9259	64.201	.9444	66.917	21
22	.8889	58.802	.9074	61.349	.9259	63.963	.9444	66.645	.9630	69.395	22
23	.9074	61.213	.9259	63.793	.9444	66.441	.9630	69.157	.9815	71.941	23
24	.9259	63.691	.9444	66.306	.9630	68.988	.9815	71.738	1.0000	74.556	24
25	.9444	66.238	.9630	68.886	.9815	71.602	1.0000	74.386	1.0185	77.238	25
26	.9630	68.852	.9815	71.534	1.0000	74.284	1.0185	77.102	1.0370	79.988	26
27	.9815	71.534	1.0000	74.250	1.0185	77.034	1.0370	79.886	1.0556	82.806	27
28	1.0000	74.284	1.0185	77.034	1.0370	79.852	1.0556	82.738	1.0741	85.691	28
29	1.0185	77.102	1.0370	79.886	1.0556	82.738	1.0741	85.657	1.0926	88.645	29
30	1.0370	79.988	1.0556	82.806	1.0741	85.691	1.0926	88.645	1.1111	91.667	30
31	1.0556	82.941	1.0741	85.793	1.0926	88.713	1.1111	91.701	1.1296	94.756	31
32	1.0741	85.963	1.0926	88.849	1.1111	91.802	1.1296	94.824	1.1481	97.914	32
33	1.0926	89.052	1.1111	91.972	1.1296	94.960	1.1481	98.015	1.1667	101.139	33
34	1.1111	92.210	1.1296	95.164	1.1481	98.185	1.1667	101.275	1.1852	104.432	34
35	1.1296	95.435	1.1481	98.423	1.1667	101.478	1.1852	104.602	1.2047	107.793	35
36	1.1481	98.728	1.1667	101.750	1.1852	104.840	1.2047	107.997	1.2222	111.222	36
37	1.1667	102.090	1.1852	105.145	1.2047	108.269	1.2222	111.460	1.2407	114.719	37
38	1.1852	105.519	1.2047	108.608	1.2222	111.765	1.2407	114.991	1.2593	118.284	38
39	1.2047	109.015	1.2222	112.139	1.2407	115.330	1.2593	118.590	1.2778	121.917	39
40	1.2222	112.580	1.2407	115.738	1.2593	118.963	1.2778	122.256	1.2963	125.617	40
41	1.2407	116.213	1.2593	119.404	1.2778	122.664	1.2963	125.991	1.3148	129.386	41
42	1.2593	119.914	1.2778	123.139	1.2963	126.432	1.3148	129.793	1.3333	133.222	42
43	1.2778	123.682	1.2963	126.941	1.3148	130.269	1.3333	133.664	1.3519	137.127	43
44	1.2963	127.519	1.3148	130.812	1.3333	134.173	1.3519	137.602	1.3704	141.099	44
45	1.3148	131.423	1.3333	134.750	1.3519	138.145	1.3704	141.608	1.3889	145.139	45
46	1.3333	135.395	1.3519	138.756	1.3704	142.185	1.3889	145.682	1.4074	149.247	46
47	1.3519	139.435	1.3704	142.830	1.3889	146.293	1.4074	149.824	1.4259	153.423	47
48	1.3704	143.543	1.3889	146.972	1.4074	150.469	1.4259	154.034	1.4444	157.667	48
49	1.3889	147.719	1.4074	151.182	1.4259	154.713	1.4444	158.312	1.4630	161.978	49
50	1.4074	151.963	1.4259	155.460	1.4444	159.025	1.4630	162.657	1.4815	166.358	50
	26		27		28		29		30		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	32.627	.5926	34.765	.6111	36.972	.6296	39.247	.6481	41.590	0
1	.5926	33.713	.6111	35.886	.6296	38.127	.6481	40.435	.6667	42.812	1
2	.6111	34.867	.6296	37.074	.6481	39.349	.6667	41.691	.6852	44.102	2
3	.6296	36.090	.6481	38.330	.6667	40.639	.6852	43.015	.7037	45.460	3
4	.6481	37.380	.6667	39.654	.6852	41.997	.7037	44.407	.7222	46.886	4
5	.6667	38.738	.6852	41.046	.7037	43.423	.7222	45.867	.7407	48.380	5
6	.6852	40.164	.7037	42.506	.7222	44.917	.7407	47.395	.7593	49.941	6
7	.7037	41.657	.7222	44.034	.7407	46.478	.7593	48.991	.7778	51.571	7
8	.7222	43.219	.7407	45.630	.7593	48.108	.7778	50.654	.7963	53.269	8
9	.7407	44.849	.7593	47.293	.7778	49.806	.7963	52.386	.8148	55.034	9
10	.7593	46.546	.7778	49.025	.7963	51.571	.8148	54.185	.8333	56.867	10
11	.7778	48.312	.7963	50.824	.8148	53.404	.8333	56.052	.8519	58.769	11
12	.7963	50.145	.8148	52.691	.8333	55.306	.8519	57.988	.8704	60.738	12
13	.8148	52.046	.8333	54.627	.8519	57.275	.8704	59.991	.8889	62.775	13
14	.8333	54.015	.8519	56.630	.8704	59.312	.8889	62.062	.9074	64.880	14
15	.8519	56.052	.8704	58.701	.8889	61.417	.9074	64.201	.9259	67.052	15
16	.8704	58.157	.8889	60.840	.9074	63.590	.9259	66.407	.9444	69.293	16
17	.8889	60.330	.9074	63.046	.9259	65.830	.9444	68.682	.9630	71.602	17
18	.9074	62.571	.9259	65.321	.9444	68.139	.9630	71.025	.9815	73.978	18
19	.9259	64.880	.9444	67.664	.9630	70.515	.9815	73.435	1.0000	76.423	19
20	.9444	67.256	.9630	70.074	.9815	72.960	1.0000	75.914	1.0185	78.935	20
21	.9630	69.701	.9815	72.552	1.0000	75.472	1.0185	78.460	1.0370	81.515	21
22	.9815	72.213	1.0000	75.099	1.0185	78.052	1.0370	81.074	1.0556	84.164	22
23	1.0000	74.793	1.0185	77.713	1.0370	80.701	1.0556	83.756	1.0741	86.880	23
24	1.0185	77.441	1.0370	80.395	1.0556	83.417	1.0741	86.506	1.0926	89.664	24
25	1.0370	80.157	1.0556	83.145	1.0741	86.201	1.0926	89.324	1.1111	92.515	25
26	1.0556	82.941	1.0741	85.963	1.0926	89.052	1.1111	92.210	1.1296	95.435	26
27	1.0741	85.793	1.0926	88.849	1.1111	91.972	1.1296	95.164	1.1481	98.423	27
28	1.0926	88.713	1.1111	91.802	1.1296	94.960	1.1481	98.185	1.1667	101.478	28
29	1.1111	91.701	1.1296	94.824	1.1481	98.015	1.1667	101.275	1.1852	104.602	29
30	1.1296	94.756	1.1481	97.914	1.1667	101.139	1.1852	104.432	1.2047	107.793	30
31	1.1481	97.880	1.1667	101.071	1.1852	104.330	1.2047	107.657	1.2222	111.052	31
32	1.1667	101.071	1.1852	104.296	1.2047	107.590	1.2222	110.951	1.2407	114.380	32
33	1.1852	104.330	1.2047	107.590	1.2222	110.917	1.2407	114.312	1.2593	117.775	33
34	1.2047	107.657	1.2222	110.951	1.2407	114.312	1.2593	117.741	1.2778	121.238	34
35	1.2222	111.052	1.2407	114.380	1.2593	117.775	1.2778	121.238	1.2963	124.769	35
36	1.2407	114.515	1.2593	117.877	1.2778	121.306	1.2963	124.802	1.3148	128.367	36
37	1.2593	118.046	1.2778	121.441	1.2963	124.904	1.3148	128.435	1.3333	132.034	37
38	1.2778	121.645	1.2963	125.074	1.3148	128.571	1.3333	132.136	1.3519	135.769	38
39	1.2963	125.312	1.3148	128.775	1.3333	132.306	1.3519	135.904	1.3704	139.571	39
40	1.3148	129.046	1.3333	132.543	1.3519	136.108	1.3704	139.741	1.3889	143.441	40
41	1.3333	132.849	1.3519	136.380	1.3704	139.978	1.3889	143.645	1.4074	147.380	41
42	1.3519	136.719	1.3704	140.284	1.3889	143.917	1.4074	147.617	1.4259	151.386	42
43	1.3704	140.657	1.3889	144.256	1.4074	147.923	1.4259	151.657	1.4444	155.460	43
44	1.3889	144.664	1.4074	148.296	1.4259	151.997	1.4444	155.765	1.4630	159.602	44
45	1.4074	148.738	1.4259	152.404	1.4444	156.139	1.4630	159.941	1.4815	163.812	45
46	1.4259	152.880	1.4444	156.580	1.4630	160.349	1.4815	164.185	1.5000	168.090	46
47	1.4444	157.090	1.4630	160.824	1.4815	164.627	1.5000	168.497	1.5185	172.435	47
48	1.4630	161.367	1.4815	165.136	1.5000	168.972	1.5185	172.877	1.5370	176.849	48
49	1.4815	165.713	1.5000	169.515	1.5185	173.386	1.5370	177.324	1.5556	181.330	49
50	1.5000	170.127	1.5185	173.963	1.5370	177.867	1.5556	181.840	1.5741	185.880	50
	31		32		33		34		35		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	44.000	.6852	46.478	.7037	49.025	.7222	51.639	.7407	54.321	0
1	.6852	45.256	.7037	47.769	.7222	50.349	.7407	52.997	.7593	55.713	1
2	.7037	46.580	.7222	49.127	.7407	51.741	.7593	54.423	.7778	57.173	2
3	.7222	47.972	.7407	50.552	.7593	53.201	.7778	55.917	.7963	58.701	3
4	.7407	49.432	.7593	52.046	.7778	54.728	.7963	57.478	.8148	60.296	4
5	.7593	50.960	.7778	53.608	.7963	56.324	.8148	59.108	.8333	61.960	5
6	.7778	52.556	.7963	55.238	.8148	57.988	.8333	60.806	.8519	63.691	6
7	.7963	54.219	.8148	56.935	.8333	59.719	.8519	62.571	.8704	65.491	7
8	.8148	55.951	.8333	58.701	.8519	61.519	.8704	64.404	.8889	67.358	8
9	.8333	57.750	.8519	60.534	.8704	63.386	.8889	66.306	.9074	69.293	9
10	.8519	59.617	.8704	62.435	.8889	65.321	.9074	68.275	.9259	71.296	10
11	.8704	61.552	.8889	64.404	.9074	67.324	.9259	70.312	.9444	73.367	11
12	.8889	63.556	.9074	66.441	.9259	69 395	.9444	72.417	.9630	75.506	12
13	.9074	65.627	.9259	68.546	.9444	71.534	.9630	74.590	.9815	77.713	13
14	.9259	67.765	.9444	70.719	.9630	73.741	.9815	76.830	1.0000	79.988	14
15	.9444	69.972	.9630	72.960	.9815	76.015	1.0000	79.139	1.0185	82.330	15
16	.9630	72.247	.9815	75.269	1.0000	78.358	1.0185	81.515	1.0370	84.741	16
17	.9815	74.590	1.0000	77.645	1.0185	80.769	1.0370	83.960	1.0556	87.219	17
18	1.0000	77.000	1.0185	80.090	1.0370	83.247	1.0556	86.472	1.0741	89.765	18
19	1.0185	79.478	1.0370	82.602	1.0556	85.793	1.0741	89.052	1.0926	92.380	19
20	1.0370	82.025	1.0556	85.182	1.0741	88.407	1.0926	91.701	1.1111	95.062	20
21	1.0556	84.639	1.0741	87.830	1.0926	91.090	1.1111	94.417	1.1296	97.812	21
22	1.0741	87.321	1.0926	90.546	1.1111	93.840	1.1296	97.201	1.1481	100.630	22
23	1.0926	90.071	1.1111	93.330	1.1296	96.657	1.1481	100.052	1.1667	103.515	23
24	1.1111	92.889	1.1296	96.182	1.1481	99.543	1.1667	102.972	1.1852	106.469	24
25	1.1296	95.775	1.1481	99.102	1.1667	102.497	1.1852	105.960	1.2047	109.491	25
26	1.1481	98.728	1.1667	102.090	1.1852	105.519	1.2047	109.015	1.2222	112.580	26
27	1.1667	101.750	1.1852	105.145	1.2047	108.608	1.2222	112.139	1.2407	115.738	27
28	1.1852	104.840	1.2047	108.269	1.2222	111.765	1.2407	115.330	1.2593	118.963	28
29	1.2047	107.997	1.2222	111.460	1.2407	114.991	1.2593	118.590	1.2778	122.256	29
30	1.2222	111.222	1.2407	114.719	1.2593	118.284	1.2778	121.917	1.2963	125.617	30
31	1.2407	114.515	1.2593	118.046	1.2778	121.645	1.2963	125.312	1.3148	129.046	31
32	1.2593	117.877	1.2778	121.441	1.2963	125.074	1.3148	128.775	1.3333	132.543	32
33	1.2778	121.306	1.2963	124.904	1.3148	128.571	1.3335	132.306	1.3519	136.108	33
34	1.2963	124.802	1.3148	128.435	1.3333	132.136	1.3519	135.904	1.3704	139.741	34
35	1.3148	128.367	1.3333	132.034	1.3519	135.769	1.3704	139.571	1.3889	143.441	35
36	1.3333	132.000	1.3519	135.701	1.3704	139.469	1.3889	143.306	1.4074	147.210	36
37	1.3519	135.701	1.3704	139.435	1.3889	143.238	1.4074	147.108	1.4259	151.046	37
38	1.3704	139.469	1.3889	143.238	1.4074	147.074	1.4259	150.978	1.4444	154.951	38
39	1.3889	143.306	1.4074	147.108	1.4259	150.978	1.4444	154.917	1.4630	158.923	39
40	1.4074	147.210	1.4259	151.046	1.4444	154.951	1.4630	158.923	1.4815	162.963	40
41	1.4259	451.182	1.4444	155.052	1.4630	158.991	1.4815	162.997	1.5000	167.071	41
42	1.4444	155.222	1.4630	159.127	1.4815	163.099	1.5000	167.139	1.5185	171.247	42
43	1.4630	159.330	1.4815	163.269	1.5000	167.275	1.5185	171.349	1.5370	175.491	43
44	1.4815	163.506	1.5000	167.478	1.5185	171.519	1.5370	175.627	1.5556	179.802	44
45	1.5000	167.750	1.5185	171.756	1.5370	175.830	1.5556	179.972	1.5741	184.182	45
46	1.5185	172.062	1.5370	176.102	1.5556	180.210	1.5741	184.386	1.5926	188.630	46
47	1.5370	176.441	1.5556	180.515	1.5741	184.657	1.5926	188.867	1.6111	193.145	47
48	1.5556	180.889	1.5741	184.997	1.5926	189.173	1.6111	193.417	1.6296	197.728	48
49	1.5741	185.404	1.5926	189.546	1.6111	193.756	1.6296	198.034	1.6481	202.380	49
50	1.5926	189.988	1.6111	194.164	1.6296	198.407	1.6481	202.719	1.6667	207.099	50
	36		37		38		39		40		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	57.071	.7778	59.889	.7963	62.775	.8148	65.728	.8333	68.750	0
1	.7778	58.497	.7963	61.349	.8148	64.269	.8333	67.256	.8519	70.312	1
2	.7963	59.991	.8148	62.877	.8333	65.830	.8519	68.852	.8704	71.941	2
3	.8148	61.552	.8333	64.472	.8519	67.460	.8704	70.515	.8889	73.639	3
4	.8333	63.182	.8519	66.136	.8704	69.157	.8889	72.247	.9074	75.404	4
5	.8519	64.880	.8704	67.867	.8889	70.923	.9074	74.046	.9259	77.238	5
6	.8704	66.645	.8889	69.667	.9074	72.756	.9259	75.914	.9444	79.139	6
7	.8889	68.478	.9074	71.534	.9259	74.657	.9444	77.849	.9630	81.108	7
8	.9074	70.380	.9259	73.469	.9444	76.627	.9630	79.852	.9815	83.145	8
9	.9259	72.349	.9444	75.472	.9630	78.664	.9815	81.923	1.0000	85.250	9
10	.9444	74.386	.9630	77.543	.9815	80.769	1.0000	84.062	1.0185	87.423	10
11	.9630	76.491	.9815	79.682	1.0000	82.941	1.0185	86.269	1.0370	89.664	11
12	.9815	78.664	1.0000	81.889	1.0185	85.182	1.0370	88.543	1.0556	91.972	12
13	1.0000	80.904	1.0185	84.164	1.0370	87.491	1.0556	90.886	1.0741	94.349	13
14	1.0185	83.213	1.0370	86.506	1.0556	89.867	1.0741	93.296	1.0926	96.793	14
15	1.0370	85.590	1.0556	88.917	1.0741	92.312	1.0926	95.775	1.1111	99.306	15
16	1.0556	88.034	1.0741	91.395	1.0926	94.824	1.1111	98.321	1.1296	101.886	16
17	1.0741	90.546	1.0926	93.941	1.1111	97.404	1.1296	100.935	1.1481	104.534	17
18	1.0926	93.127	1.1111	96.556	1.1296	100.052	1.1481	103.617	1.1667	107.250	18
19	1.1111	95.775	1.1296	99.238	1.1481	102.769	1.1667	106.367	1.1852	110.034	19
20	1.1296	98.491	1.1481	101.988	1.1667	105.552	1.1852	109.185	1.2047	112.886	20
21	1.1481	101.275	1.1667	104.806	1.1852	108.404	1.2047	112.071	1.2222	115.806	21
22	1.1667	104.127	1.1852	107.691	1.2047	111.324	1.2222	115.025	1.2407	118.793	22
23	1.1852	107.046	1.2047	110.645	1.2222	114.312	1.2407	118.046	1.2593	121.849	23
24	1.2047	110.034	1.2222	113.667	1.2407	117.367	1.2593	121.136	1.2778	124.972	24
25	1.2222	113.090	1.2407	116.756	1.2593	120.491	1.2778	124.293	1.2963	128.164	25
26	1.2407	116.213	1.2593	119.914	1.2778	123.682	1.2963	127.519	1.3148	131.423	26
27	1.2593	119.404	1.2778	123.139	1.2963	126.941	1.3148	130.812	1.3333	134.750	27
28	1.2778	122.664	1.2963	126.432	1.3148	130.269	1.3333	134.173	1.3519	138.145	28
29	1.2963	125.991	1.3148	129.793	1.3333	133.664	1.3519	137.602	1.3704	141.608	29
30	1.3148	129.386	1.3333	133.222	1.3519	137.127	1.3704	141.099	1.3889	145.139	30
31	1.3333	132.849	1.3519	136.719	1.3704	140.657	1.3889	144.664	1.4074	148.738	31
32	1.3519	136.380	1.3704	140.284	1.3889	144.256	1.4074	148.296	1.4259	152.404	32
33	1.3704	139.978	1.3889	143.917	1.4074	147.923	1.4259	151.997	1.4444	156.139	33
34	1.3889	143.645	1.4074	147.617	1.4259	151.657	1.4444	155.765	1.4630	159.941	34
35	1.4074	147.380	1.4259	151.386	1.4444	155.460	1.4630	159.602	1.4815	163.812	35
36	1.4259	151.182	1.4444	155.222	1.4630	159.330	1.4815	163.506	1.5000	167.750	36
37	1.4444	155.052	1.4630	159.127	1.4815	163.269	1.5000	167.478	1.5185	171.756	37
38	1.4630	158.991	1.4815	163.099	1.5000	167.275	1.5185	171.519	1.5370	175.830	38
39	1.4815	162.997	1.5000	167.139	1.5185	171.349	1.5370	175.627	1.5556	179.972	39
40	1.5000	167.071	1.5185	171.247	1.5370	175.491	1.5556	179.802	1.5741	184.182	40
41	1.5185	171.213	1.5370	175.423	1.5556	179.701	1.5741	184.046	1.5926	188.460	41
42	1.5370	175.423	1.5556	179.667	1.5741	183.978	1.5926	188.358	1.6111	192.806	42
43	1.5556	179.701	1.5741	183.978	1.5926	188.324	1.6111	192.738	1.6296	197.219	43
44	1.5741	184.046	1.5926	188.358	1.6111	192.738	1.6296	197.185	1.6481	201.701	44
45	1.5926	188.460	1.6111	192.806	1.6296	197.219	1.6481	201.701	1.6667	206.250	45
46	1.6111	192.941	1.6296	197.321	1.6481	201.769	1.6667	206.284	1.6852	210.867	46
47	1.6296	197.491	1.6481	201.904	1.6667	206.386	1.6852	210.935	1.7037	215.552	47
48	1.6481	202.108	1.6667	206.556	1.6852	211.071	1.7037	215.654	1.7222	220.306	48
49	1.6667	206.793	1.6852	211.275	1.7037	215.824	1.7222	220.441	1.7407	225.127	49
50	1.6852	211.546	1.7037	216.062	1.7222	220.645	1.7407	225.296	1.7593	230.015	50
	41		42		43		44		45		

TABLE XXXII.—BASE 1—SLOPES $2\frac{3}{4}$ to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	71.840	.8704	74.997	.8889	78.222	.9074	81.515	.9259	84.877	0
1	.8704	73.435	.8889	76.627	.9074	79.886	.9259	83.213	.9444	86.608	1
2	.8889	75.099	.9074	78.324	.9259	81.617	.9444	84.978	.9630	88.407	2
3	.9074	76.830	.9259	80.090	.9444	83.417	.9630	86.812	.9815	90.275	3
4	.9259	78.630	.9444	81.923	.9630	85.284	.9815	88.713	1.0000	92.210	4
5	.9444	80.497	.9630	83.824	.9815	87.219	1.0000	90.682	1.0185	94.213	5
6	.9630	82.432	.9815	85.793	1.0000	89.222	1.0185	92.719	1.0370	96.284	6
7	.9815	84.435	1.0000	87.830	1.0185	91.293	1.0370	94.824	1.0556	98.423	7
8	1.0000	86.506	1.0185	89.935	1.0370	93.432	1.0556	96.997	1.0741	100.630	8
9	1.0185	88.645	1.0370	92.108	1.0556	95.639	1.0741	99.238	1.0926	102.904	9
10	1.0370	90.852	1.0556	94.349	1.0741	97.914	1.0926	101.546	1.1111	105.247	10
11	1.0556	93.127	1.0741	96.657	1.0926	100.256	1.1111	103.923	1.1296	107.657	11
12	1.0741	95.469	1.0926	99.034	1.1111	102.667	1.1296	106.367	1.1481	110.136	12
13	1.0926	97.880	1.1111	101.478	1.1296	105.145	1.1481	108.880	1.1667	112.682	13
14	1.1111	100.358	1.1296	103.991	1.1481	107.691	1.1667	111.460	1.1852	115.296	14
15	1.1296	102.904	1.1481	106.571	1.1667	110.306	1.1852	114.108	1.2047	117.978	15
16	1.1481	105.519	1.1667	109.219	1.1852	112.988	1.2047	116.824	1.2222	120.728	16
17	1.1667	108.201	1.1852	111.935	1.2047	115.738	1.2222	119.608	1.2407	123.546	17
18	1.1852	110.951	1.2047	114.719	1.2222	118.556	1.2407	122.460	1.2593	126.432	18
19	1.2047	113.769	1.2222	117.571	1.2407	121.441	1.2593	125.380	1.2778	129.386	19
20	1.2222	116.654	1.2407	120.491	1.2593	124.395	1.2778	128.367	1.2963	132.407	20
21	1.2407	119.608	1.2593	123.478	1.2778	127.417	1.2963	131.423	1.3148	135.497	21
22	1.2593	122.630	1.2778	126.534	1.2963	130.506	1.3148	134.546	1.3333	138.654	22
23	1.2778	125.719	1.2963	129.657	1.3148	133.664	1.3333	137.738	1.3519	141.880	23
24	1.2963	128.877	1.3148	132.849	1.3333	136.889	1.3519	140.997	1.3704	145.173	24
25	1.3148	132.102	1.3333	136.108	1.3519	140.182	1.3704	144.324	1.3889	148.534	25
26	1.3333	135.395	1.3519	139.435	1.3704	145.543	1.3889	147.719	1.4074	151.963	26
27	1.3519	138.756	1.3704	142.830	1.3889	146.972	1.4074	151.182	1.4259	155.460	27
28	1.3704	142.185	1.3889	146.293	1.4074	150.469	1.4259	154.713	1.4444	159.025	28
29	1.3889	145.682	1.4074	149.824	1.4259	154.034	1.4444	158.312	1.4630	162.657	29
30	1.4074	149.247	1.4259	153.423	1.4444	157.667	1.4630	161.978	1.4815	166.358	30
31	1.4259	152.880	1.4444	157.090	1.4630	161.367	1.4815	165.713	1.5000	170.127	31
32	1.4444	156.580	1.4630	160.824	1.4815	165.136	1.5000	169.515	1.5185	173.963	32
33	1.4630	160.349	1.4815	164.627	1.5000	168.972	1.5185	173.386	1.5370	177.867	33
34	1.4815	164.185	1.5000	168.497	1.5185	172.877	1.5370	177.324	1.5556	181.840	34
35	1.5000	168.090	1.5185	172.435	1.5370	176.849	1.5556	181.330	1.5741	185.880	35
36	1.5185	172.062	1.5370	176.441	1.5556	180.889	1.5741	185.404	1.5926	189.988	36
37	1.5370	176.102	1.5556	180.515	1.5741	184.997	1.5926	189.546	1.6111	194.164	37
38	1.5556	180.210	1.5741	184.657	1.5926	189.173	1.6111	193.756	1.6296	198.407	38
39	1.5741	184.386	1.5926	188.867	1.6111	193.417	1.6296	198.034	1.6481	202.719	39
40	1.5926	188.630	1.6111	193.145	1.6296	197.728	1.6481	202.380	1.6667	207.099	40
41	1.6111	192.941	1.6296	197.491	1.6481	202.108	1.6667	206.793	1.6852	211.546	41
42	1.6296	197.321	1.6481	201.904	1.6667	206.556	1.6852	211.275	1.7037	216.062	42
43	1.6481	201.976	1.6667	206.386	1.6852	211.071	1.7037	215.824	1.7222	220.645	43
44	1.6667	206.284	1.6852	210.935	1.7037	215.654	1.7222	220.441	1.7407	225.296	44
45	1.6852	210.867	1.7037	215.552	1.7222	220.306	1.7407	225.127	1.7593	230.015	45
46	1.7037	215.519	1.7222	220.238	1.7407	225.025	1.7593	229.880	1.7778	234.802	46
47	1.7222	220.238	1.7407	224.991	1.7593	229.812	1.7778	234.701	1.7963	239.657	47
48	1.7407	225.025	1.7593	229.812	1.7778	234.667	1.7963	239.590	1.8148	244.580	48
49	1.7593	229.880	1.7778	234.701	1.7963	239.590	1.8148	244.546	1.8333	249.571	49
50	1.7778	234.802	1.7963	239.657	1.8148	244.580	1.8333	249.571	1.8519	254.630	50
	46		47		48		49		50		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	1		2		3		4		5		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.0185	0.037	.0370	0.148	.0556	0.333	.0741	0.593	.0926	0.926	0
1	.0370	0.111	.0556	0.259	.0741	0.481	.0926	0.778	.1111	1.148	1
2	.0556	0.259	.0741	0.444	.0926	0.704	.1111	1.037	.1296	1.444	2
3	.0741	0.481	.0926	0.704	.1111	1.000	.1296	1.370	.1481	1.815	3
4	.0926	0.778	.1111	1.037	.1296	1.370	.1481	1.778	.1667	2.259	4
5	.1111	1.148	.1296	1.444	.1481	1.815	.1667	2.259	.1852	2.776	5
6	.1296	1.593	.1481	1.926	.1667	2.333	.1852	2.815	.2047	3.370	6
7	.1481	2.111	.1667	2.481	.1852	2.926	.2047	3.444	.2222	4.037	7
8	.1667	2.704	.1852	3.111	.2047	3.593	.2222	4.148	.2407	4.778	8
9	.1852	3.370	.2047	3.815	.2222	4.333	.2407	4.926	.2593	5.593	9
10	.2047	4.111	.2222	4.593	.2407	5.148	.2593	5.778	.2778	6.481	10
11	.2222	4.926	.2407	5.444	.2593	6.037	.2778	6.704	.2963	7.444	11
12	.2407	5.815	.2593	6.370	.2778	7.000	.2963	7.704	.3148	8.481	12
13	.2593	6.778	.2778	7.370	.2963	8.037	.3148	8.778	.3333	9.593	13
14	.2778	7.815	.2963	8.444	.3148	9.148	.3333	9.926	.3519	10.778	14
15	.2963	8.926	.3148	9.593	.3333	10.333	.3519	11.148	.3704	12.037	15
16	.3148	10.111	.3333	10.815	.3519	11.593	.3704	12.444	.3889	13.370	16
17	.3333	11.370	.3519	12.111	.3704	12.926	.3889	13.815	.4074	14.778	17
18	.3519	12.704	.3704	13.481	.3889	14.333	.4074	15.259	.4259	16.259	18
19	.3704	14.111	.3889	14.926	.4074	15.815	.4259	16.778	.4444	17.815	19
20	.3889	15.593	.4074	16.444	.4259	17.370	.4444	18.370	.4630	19.444	20
21	.4074	17.148	.4259	18.037	.4444	19.000	.4630	20.037	.4815	21.148	21
22	.4259	18.778	.4444	19.704	.4630	20.704	.4815	21.778	.5000	22.926	22
23	.4444	20.481	.4630	21.444	.4815	22.481	.5000	23.593	.5185	24.778	23
24	.4630	22.259	.4815	23.259	.5000	24.333	.5185	25.481	.5370	26.704	24
25	.4815	24.111	.5000	25.148	.5185	26.259	.5370	27.444	.5556	28.704	25
26	.5000	26.037	.5185	27.111	.5370	28.259	.5556	29.481	.5741	30.778	26
27	.5185	28.037	.5370	29.148	.5556	30.333	.5741	31.593	.5926	32.926	27
28	.5370	30.111	.5556	31.259	.5741	32.481	.5926	33.778	.6111	35.148	28
29	.5556	32.259	.5741	33.444	.5926	34.704	.6111	36.037	.6296	37.444	29
30	.5741	34.481	.5926	35.704	.6111	37.000	.6296	38.370	.6481	39.815	30
31	.5926	36.778	.6111	38.037	.6296	39.370	.6481	40.778	.6667	42.259	31
32	.6111	39.148	.6296	40.444	.6481	41.815	.6667	43.259	.6852	44.778	32
33	.6296	41.593	.6481	42.926	.6667	44.333	.6852	45.815	.7037	47.370	33
34	.6481	44.111	.6667	45.481	.6852	46.926	.7037	48.444	.7222	50.037	34
35	.6667	46.704	.6852	48.111	.7037	49.593	.7222	51.148	.7407	52.778	35
36	.6852	49.370	.7037	50.815	.7222	52.333	.7407	53.926	.7593	55.593	36
37	.7037	52.111	.7222	53.593	.7407	55.148	.7593	56.778	.7778	58.481	37
38	.7222	54.926	.7407	56.444	.7593	58.037	.7778	59.704	.7963	61.444	38
39	.7407	57.815	.7593	59.370	.7778	61.000	.7963	62.704	.8148	64.481	39
40	.7593	60.778	.7778	62.370	.7963	64.037	.8148	65.778	.8333	67.593	40
41	.7778	63.815	.7963	65.444	.8148	67.148	.8333	68.926	.8519	70.778	41
42	.7963	66.926	.8148	68.593	.8333	70.333	.8519	72.148	.8704	74.037	42
43	.8148	70.111	.8333	71.815	.8519	73.593	.8704	75.444	.8889	77.370	43
44	.8333	73.370	.8519	75.111	.8704	76.926	.8889	78.815	.9074	80.778	44
45	.8519	76.704	.8704	78.481	.8889	80.333	.9074	82.259	.9259	84.259	45
46	.8704	80.111	.8889	81.926	.9074	83.815	.9259	85.778	.9444	87.815	46
47	.8889	83.593	.9074	85.444	.9259	87.370	.9444	89.370	.9630	91.444	47
48	.9074	87.148	.9259	89.037	.9444	91.000	.9630	93.037	.9815	95.148	48
49	.9259	90.778	.9444	92.704	.9630	94.704	.9815	96.778	1.0000	98.926	49
50	.9444	94.481	.9630	96.444	.9815	98.481	1.0000	100.593	1.0185	102.778	50
	1		2		3		4		5		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	6		7		8		9		10		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.1111	1.333	.1296	1.815	.1481	2.370	.1667	3.000	.1852	3.704	0
1	.1296	1.593	.1481	2.111	.1667	2.704	.1852	3.370	.2047	4.111	1
2	.1481	1.926	.1667	2.481	.1852	3.111	.2047	3.815	.2222	4.593	2
3	.1667	2.333	.1852	2.926	.2047	3.593	.2222	4.333	.2407	5.148	3
4	.1852	2.815	.2047	3.444	.2222	4.148	.2407	4.926	.2593	5.778	4
5	.2047	3.370	.2222	4.037	.2407	4.778	.2593	5.593	.2778	6.481	5
6	.2222	4.000	.2407	4.704	.2593	5.481	.2778	6.333	.2963	7.259	6
7	.2407	4.704	.2593	5.444	.2778	6.259	.2963	7.148	.3148	8.111	7
8	.2593	5.481	.2778	6.259	.2963	7.111	.3148	8.037	.3333	9.037	8
9	.2778	6.333	.2963	7.148	.3148	8.037	.3333	9.000	.3519	10.037	9
10	.2963	7.259	.3148	8.111	.3333	9.037	.3519	10.037	.3704	11.111	10
11	.3148	8.259	.3333	9.148	.3519	10.111	.3704	11.148	.3889	12.259	11
12	.3333	9.333	.3519	10.259	.3704	11.259	.3889	12.333	.4074	13.481	12
13	.3519	10.481	.3704	11.444	.3889	12.481	.4074	13.595	.4259	14.778	13
14	.3704	11.704	.3889	12.704	.4074	13.778	.4259	14.926	.4444	16.148	14
15	.3889	13.000	.4074	14.037	.4259	15.148	.4444	16.333	.4630	17.593	15
16	.4074	14.370	.4259	15.444	.4444	16.593	.4630	17.815	.4815	19.111	16
17	.4259	15.815	.4444	16.926	.4630	18.111	.4815	19.370	.5000	20.704	17
18	.4444	17.333	.4630	18.481	.4815	19.704	.5000	21.000	.5185	22.370	18
19	.4630	18.926	.4815	20.111	.5000	21.370	.5185	22.704	.5370	24.111	19
20	.4815	20.593	.5000	21.815	.5185	23.111	.5370	24.481	.5556	25.926	20
21	.5000	22.333	.5185	23.593	.5370	24.926	.5556	26.333	.5741	27.815	21
22	.5185	24.148	.5370	25.444	.5556	26.815	.5741	28.259	.5926	29.778	22
23	.5370	26.037	.5556	27.370	.5741	28.778	.5926	30.259	.6111	31.815	23
24	.5556	28.000	.5741	29.370	.5926	30.815	.6111	32.333	.6296	33.926	24
25	.5741	30.037	.5926	31.444	.6111	32.926	.6296	34.481	.6481	36.111	25
26	.5926	32.148	.6111	33.593	.6296	35.111	.6481	36.704	.6667	38.370	26
27	.6111	34.333	.6296	35.815	.6481	37.370	.6667	39.000	.6852	40.704	27
28	.6296	36.593	.6481	38.111	.6667	39.704	.6852	41.370	.7037	43.111	28
29	.6481	38.926	.6667	40.481	.6852	42.111	.7037	43.815	.7222	45.593	29
30	.6667	41.333	.6852	42.926	.7037	44.593	.7222	46.333	.7407	48.148	30
31	.6852	43.815	.7037	45.444	.7222	47.148	.7407	48.926	.7593	50.778	31
32	.7037	46.370	.7222	48.037	.7407	49.778	.7593	51.593	.7778	53.481	32
33	.7222	49.000	.7407	50.704	.7593	52.481	.7778	54.333	.7963	56.259	33
34	.7407	51.704	.7593	53.444	.7778	55.259	.7963	57.148	.8148	59.111	34
35	.7593	54.481	.7778	56.259	.7963	58.111	.8148	60.037	.8333	62.037	35
36	.7778	57.333	.7963	59.148	.8148	61.037	.8333	63.000	.8519	65.037	36
37	.7963	60.259	.8148	62.111	.8333	64.037	.8519	66.037	.8704	68.111	37
38	.8148	63.259	.8333	65.148	.8519	67.111	.8704	69.148	.8889	71.259	38
39	.8333	66.333	.8519	68.259	.8704	70.259	.8889	72.333	.9074	74.481	39
40	.8519	69.481	.8704	71.444	.8889	73.481	.9074	75.593	.9259	77.778	40
41	.8704	72.704	.8889	74.704	.9074	76.778	.9259	78.926	.9444	81.148	41
42	.8889	76.000	.9074	78.037	.9259	80.148	.9444	82.333	.9630	84.593	42
43	.9074	79.370	.9259	81.444	.9444	83.593	.9630	85.815	.9815	88.111	43
44	.9259	82.815	.9444	84.926	.9630	87.111	.9815	89.370	1.0000	91.704	44
45	.9444	86.333	.9630	88.481	.9815	90.704	1.0000	93.000	1.0185	95.370	45
46	.9630	89.926	.9815	92.111	1.0000	94.370	1.0185	96.704	1.0370	99.111	46
47	.9815	93.593	1.0000	95.815	1.0185	98.111	1.0370	100.481	1.0556	102.926	47
48	1.0000	97.333	1.0185	99.593	1.0370	101.926	1.0556	104.333	1.0741	106.815	48
49	1.0185	101.148	1.0370	103.444	1.0556	105.815	1.0741	108.259	1.0926	110.778	49
50	1.0370	105.037	1.0556	107.370	1.0741	109.778	1.0926	112.259	1.1111	114.815	50
	6		7		8		9		10		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	11		12		13		14		15		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.2047	4.481	.2222	5.333	.2407	6.259	.2593	7.259	.2778	8.333	0
1	.2222	4.926	.2407	5.815	.2593	6.778	.2778	7.815	.2963	8.926	1
2	.2407	5.444	.2593	6.370	.2778	7.370	.2963	8.444	.3148	9.593	2
3	.2593	6.037	.2778	7.000	.2963	8.037	.3148	9.148	.3333	10.333	3
4	.2778	6.704	.2963	7.704	.3148	8.778	.3333	9.926	.3519	11.148	4
5	.2963	7.444	.3148	8.481	.3333	9.593	.3519	10.778	.3704	12.037	5
6	.3148	8.259	.3333	9.333	.3519	10.481	.3704	11.704	.3889	13.000	6
7	.3333	9.148	.3519	10.259	.3704	11.444	.3889	12.704	.4074	14.037	7
8	.3519	10.111	.3704	11.259	.3889	12.481	.4074	13.778	.4259	15.148	8
9	.3704	11.148	.3889	12.333	.4074	13.593	.4259	14.926	.4444	16.333	9
10	.3889	12.259	.4074	13.481	.4259	14.778	.4444	16.148	.4630	17.593	10
11	.4074	13.444	.4259	14.704	.4444	16.037	.4630	17.444	.4815	18.926	11
12	.4259	14.704	.4444	16.000	.4630	17.370	.4815	18.815	.5000	20.333	12
13	.4444	16.037	.4630	17.370	.4815	18.778	.5000	20.259	.5185	21.815	13
14	.4630	17.444	.4815	18.815	.5000	20.259	.5185	21.778	.5370	23.370	14
15	.4815	18.926	.5000	20.333	.5185	21.815	.5370	23.370	.5556	25.000	15
16	.5000	20.481	.5185	21.926	.5370	23.444	.5556	25.037	.5741	26.704	16
17	.5185	22.111	.5370	23.593	.5556	25.148	.5741	26.778	.5926	28.481	17
18	.5370	23.815	.5556	25.333	.5741	26.926	.5926	28.593	.6111	30.333	18
19	.5556	25.593	.5741	27.148	.5926	28.778	.6111	30.481	.6296	32.259	19
20	.5741	27.444	.5926	29.037	.6111	30.704	.6296	32.444	.6481	34.259	20
21	.5926	29.370	.6111	31.000	.6296	32.704	.6481	34.481	.6667	36.333	21
22	.6111	31.370	.6296	33.037	.6481	34.778	.6667	36.593	.6852	38.481	22
23	.6296	33.444	.6481	35.148	.6667	36.926	.6852	38.778	.7037	40.704	23
24	.6481	35.593	.6667	37.333	.6852	39.148	.7037	41.037	.7222	43.000	24
25	.6667	37.815	.6852	39.593	.7037	41.444	.7222	43.370	.7407	45.370	25
26	.6852	40.111	.7037	41.926	.7222	43.815	.7407	45.778	.7593	47.815	26
27	.7037	42.481	.7222	44.333	.7407	46.259	.7593	48.259	.7778	50.333	27
28	.7222	44.926	.7407	46.815	.7593	48.778	.7778	50.815	.7963	52.926	28
29	.7407	47.444	.7593	49.370	.7778	51.370	.7963	53.444	.8148	55.593	29
30	.7593	50.037	.7778	52.000	.7963	54.037	.8148	56.148	.8333	58.333	30
31	.7778	52.704	.7963	54.704	.8148	56.778	.8333	58.926	.8519	61.148	31
32	.7963	55.444	.8148	57.481	.8333	59.593	.8519	61.778	.8704	64.037	32
33	.8148	58.259	.8333	60.333	.8519	62.481	.8704	64.704	.8889	67.000	33
34	.8333	61.148	.8519	63.259	.8704	65.444	.8889	67.704	.9074	70.037	34
35	.8519	64.111	.8704	66.259	.8889	68.481	.9074	70.778	.9259	73.148	35
36	.8704	67.148	.8889	69.333	.9074	71.593	.9259	73.926	.9444	76.333	36
37	.8889	70.259	.9074	72.481	.9259	74.778	.9444	77.148	.9630	79.593	37
38	.9074	73.444	.9259	75.704	.9444	78.037	.9630	80.444	.9815	82.926	38
39	.9259	76.704	.9444	79.000	.9630	81.370	.9815	83.815	1.0000	86.333	39
40	.9444	80.037	.9630	82.370	.9815	84.778	1.0000	87.259	1.0185	89.815	40
41	.9630	83.444	.9815	85.815	1.0000	88.259	1.0185	90.778	1.0370	93.370	41
42	.9815	86.926	1.0000	89.333	1.0185	91.815	1.0370	94.370	1.0556	97.000	42
43	1.0000	90.481	1.0185	92.926	1.0370	95.444	1.0556	98.037	1.0741	100.704	43
44	1.0185	94.111	1.0370	96.593	1.0556	99.148	1.0741	101.778	1.0926	104.481	44
45	1.0370	97.815	1.0556	100.333	1.0741	102.926	1.0926	105.593	1.1111	108.333	45
46	1.0556	101.593	1.0741	104.148	1.0926	106.778	1.1111	109.481	1.1296	112.259	46
47	1.0741	105.444	1.0926	108.037	1.1111	110.704	1.1296	113.444	1.1481	116.259	47
48	1.0926	109.370	1.1111	112.000	1.1296	114.704	1.1481	117.481	1.1667	120.333	48
49	1.1111	113.370	1.1296	116.037	1.1481	118.778	1.1667	121.593	1.1852	124.481	49
50	1.1296	117.444	1.1481	120.148	1.1667	122.926	1.1852	125.778	1.2047	128.704	50
	11		12		13		14		15		

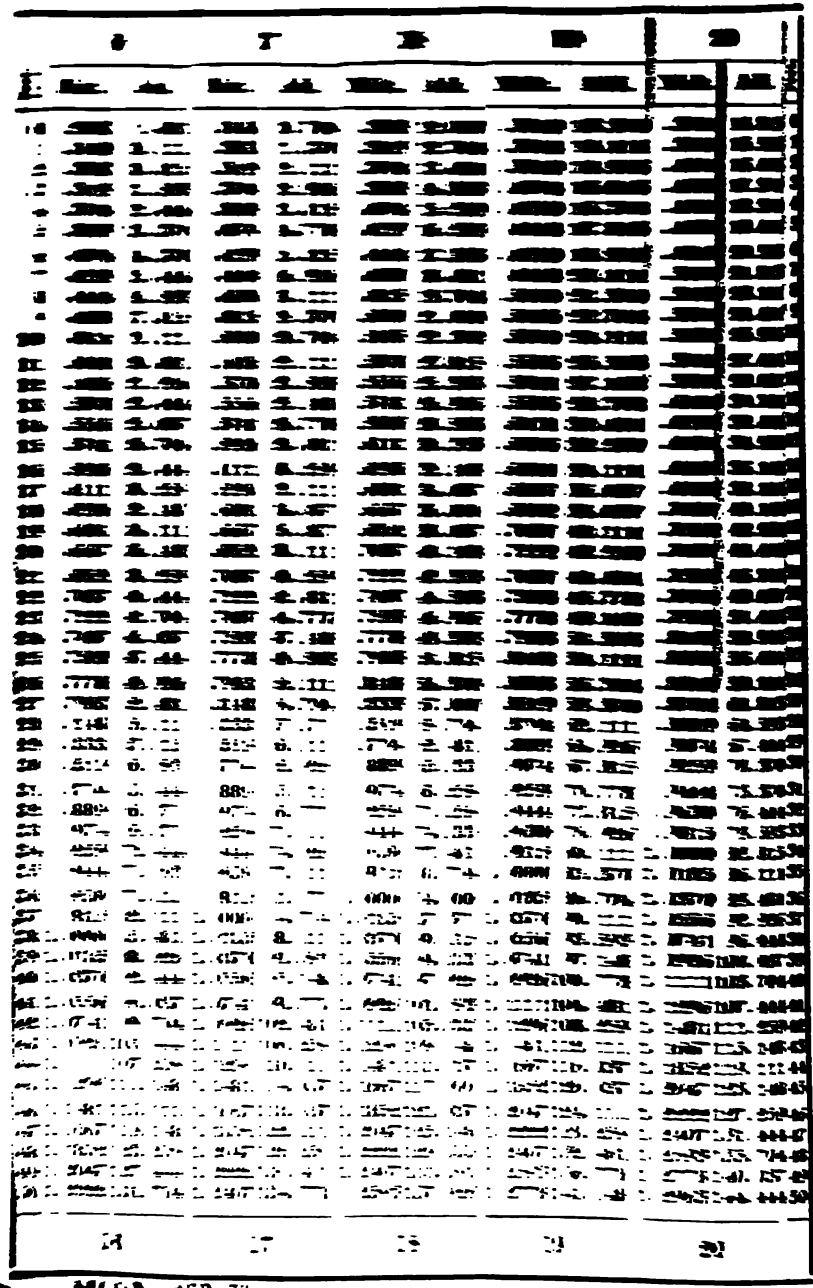


TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	21		22		23		24		25		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.3889	16.333	.4074	17.926	.4259	19.593	.4444	21.333	.4630	23.148	0
1	.4074	17.148	.4259	18.778	.4444	20.481	.4630	22.259	.4815	24.111	1
2	.4259	18.037	.4444	19.704	.4630	21.444	.4815	23.259	.5000	25.148	2
3	.4444	19.000	.4630	20.704	.4815	22.481	.5000	24.333	.5185	26.259	3
4	.4630	20.037	.4815	21.778	.5000	23.593	.5185	25.481	.5370	27.444	4
5	.4815	21.148	.5000	22.926	.5185	24.778	.5370	26.704	.5556	28.704	5
6	.5000	22.333	.5185	24.148	.5370	26.037	.5556	28.000	.5741	30.037	6
7	.5185	23.593	.5370	25.444	.5556	27.370	.5741	29.370	.5926	31.444	7
8	.5370	24.926	.5556	26.815	.5741	28.778	.5926	30.815	.6111	32.926	8
9	.5556	26.333	.5741	28.259	.5926	30.259	.6111	32.333	.6296	34.481	9
10	.5741	27.815	.5926	29.778	.6111	31.815	.6296	33.926	.6481	36.111	10
11	.5926	29.370	.6111	31.370	.6296	33.444	.6481	35.593	.6667	37.815	11
12	.6111	31.000	.6296	33.037	.6481	35.148	.6667	37.333	.6852	39.593	12
13	.6296	32.704	.6481	34.778	.6667	36.926	.6852	39.148	.7037	41.444	13
14	.6481	34.481	.6667	36.593	.6852	38.778	.7037	41.037	.7222	43.370	14
15	.6667	36.333	.6852	38.481	.7037	40.704	.7222	43.000	.7407	45.370	15
16	.6852	38.259	.7037	40.444	.7222	42.704	.7407	45.037	.7593	47.444	16
17	.7037	40.259	.7222	42.481	.7407	44.778	.7593	47.148	.7778	49.593	17
18	.7222	42.333	.7407	44.593	.7593	46.926	.7778	49.333	.7963	51.815	18
19	.7407	44.481	.7593	46.778	.7778	49.148	.7963	51.593	.8148	54.111	19
20	.7593	46.704	.7778	49.037	.7963	51.444	.8148	53.926	.8333	56.481	20
21	.7778	49.000	.7963	51.370	.8148	53.815	.8333	56.333	.8519	58.926	21
22	.7963	51.370	.8148	53.778	.8333	56.259	.8519	58.815	.8704	61.444	22
23	.8148	53.815	.8333	56.259	.8519	58.778	.8704	61.370	.8889	64.037	23
24	.8333	56.333	.8519	58.815	.8704	61.370	.8889	64.000	.9074	66.704	24
25	.8519	58.926	.8704	61.444	.8889	64.037	.9074	66.704	.9259	69.444	25
26	.8704	61.593	.8889	64.148	.9074	66.778	.9259	69.481	.9444	72.259	26
27	.8889	64.333	.9074	66.926	.9259	69.593	.9444	72.333	.9630	75.148	27
28	.9074	67.148	.9259	69.778	.9444	72.481	.9630	75.259	.9815	78.111	28
29	.9259	70.037	.9444	72.704	.9630	75.444	.9815	78.259	1.0000	81.148	29
30	.9444	73.000	.9630	75.704	.9815	78.481	1.0000	81.333	1.0185	84.259	30
31	.9630	76.037	.9815	78.778	1.0000	81.593	1.0185	84.481	1.0370	87.444	31
32	.9815	79.148	1.0000	81.926	1.0185	84.778	1.0370	87.704	1.0556	90.704	32
33	1.0000	82.333	1.0185	85.148	1.0370	88.037	1.0556	91.000	1.0741	94.037	33
34	1.0185	85.593	1.0370	88.444	1.0556	91.370	1.0741	94.370	1.0926	97.444	34
35	1.0370	88.926	1.0556	91.815	1.0741	94.778	1.0926	97.815	1.1111	100.926	35
36	1.0556	92.333	1.0741	95.259	1.0926	98.259	1.1111	101.333	1.1296	104.481	36
37	1.0741	95.815	1.0926	98.778	1.1111	101.815	1.1296	104.926	1.1481	108.111	37
38	1.0926	99.370	1.1111	102.370	1.1296	105.444	1.1481	108.593	1.1667	111.815	38
39	1.1111	103.000	1.1296	106.037	1.1481	109.148	1.1667	112.333	1.1852	115.593	39
40	1.1296	106.704	1.1481	109.778	1.1667	112.926	1.1852	116.148	1.2047	119.444	40
41	1.1481	110.481	1.1667	113.593	1.1852	116.778	1.2047	120.037	1.2222	123.370	41
42	1.1667	114.333	1.1852	117.481	1.2047	120.704	1.2222	124.000	1.2407	127.370	42
43	1.1852	118.259	1.2047	121.444	1.2222	124.704	1.2407	128.037	1.2593	131.444	43
44	1.2047	122.259	1.2222	125.481	1.2407	128.778	1.2593	132.148	1.2778	135.593	44
45	1.2222	126.333	1.2407	129.593	1.2593	132.926	1.2778	136.333	1.2963	139.815	45
46	1.2407	130.481	1.2593	133.778	1.2778	137.148	1.2963	140.593	1.3148	144.111	46
47	1.2593	134.704	1.2778	138.037	1.2963	141.444	1.3148	144.926	1.3333	148.481	47
48	1.2778	139.000	1.2963	142.370	1.3148	145.815	1.3333	149.333	1.3519	152.926	48
49	1.2963	143.370	1.3148	146.778	1.3333	150.259	1.3519	153.815	1.3704	157.444	49
50	1.3148	147.815	1.3333	151.259	1.3519	154.778	1.3704	158.370	1.3889	162.037	50
	21		22		23		24		25		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	26		27		28		29		30		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.4815	25.037	.5000	27.000	.5185	29.037	.5370	31.148	.5556	33.333	0
1	.5000	26.037	.5185	28.037	.5370	30.111	.5556	32.259	.5741	34.481	1
2	.5185	27.111	.5370	29.148	.5556	31.259	.5741	33.444	.5926	35.704	2
3	.5370	28.259	.5556	30.333	.5741	32.481	.5926	34.704	.6111	37.000	3
4	.5556	29.481	.5741	31.593	.5926	33.778	.6111	36.037	.6296	38.370	4
5	.5741	30.778	.5926	32.926	.6111	35.148	.6296	37.444	.6481	39.815	5
6	.5926	32.148	.6111	34.333	.6296	36.593	.6481	38.926	.6667	41.333	6
7	.6111	33.593	.6296	35.815	.6481	38.111	.6667	40.481	.6852	42.926	7
8	.6296	35.111	.6481	37.370	.6667	39.704	.6852	42.111	.7037	44.593	8
9	.6481	36.704	.6667	39.000	.6852	41.370	.7037	43.815	.7222	46.333	9
10	.6667	38.370	.6852	40.704	.7037	43.111	.7222	45.593	.7407	48.148	10
11	.6852	40.111	.7037	42.481	.7222	44.926	.7407	47.444	.7593	50.037	11
12	.7037	41.926	.7222	44.333	.7407	46.815	.7593	49.370	.7778	52.000	12
13	.7222	43.815	.7407	46.259	.7593	48.778	.7778	51.370	.7963	54.037	13
14	.7407	45.778	.7593	48.259	.7778	50.815	.7963	53.444	.8148	56.148	14
15	.7593	47.815	.7778	50.333	.7963	52.926	.8148	55.593	.8333	58.333	15
16	.7778	49.926	.7963	52.481	.8148	55.111	.8333	57.815	.8519	60.593	16
17	.7963	52.111	.8148	54.704	.8333	57.370	.8519	60.111	.8704	62.926	17
18	.8148	54.370	.8333	57.000	.8519	59.704	.8704	62.481	.8889	65.333	18
19	.8333	56.704	.8519	59.370	.8704	62.111	.8889	64.926	.9074	67.815	19
20	.8519	59.111	.8704	61.815	.8889	64.593	.9074	67.444	.9259	70.370	20
21	.8704	61.593	.8889	64.333	.9074	67.148	.9259	70.037	.9444	73.000	21
22	.8889	64.148	.9074	66.926	.9259	69.778	.9444	72.704	.9630	75.704	22
23	.9074	66.778	.9259	69.593	.9444	72.481	.9630	75.444	.9815	78.481	23
24	.9259	69.481	.9444	72.333	.9630	75.259	.9815	78.259	1.0000	81.333	24
25	.9444	72.259	.9630	75.148	.9815	78.111	1.0000	81.148	1.0185	84.259	25
26	.9630	75.111	.9815	78.037	1.0000	81.037	1.0185	84.111	1.0370	87.259	26
27	.9815	78.037	1.0000	81.000	1.0185	84.037	1.0370	87.148	1.0556	90.333	27
28	1.0000	81.037	1.0185	84.037	1.0370	87.111	1.0556	90.259	1.0741	93.481	28
29	1.0185	84.111	1.0370	87.148	1.0556	90.259	1.0741	93.444	1.0926	96.704	29
30	1.0370	87.259	1.0556	90.333	1.0741	93.481	1.0926	96.704	1.1111	100.000	30
31	1.0556	90.481	1.0741	93.593	1.0926	96.778	1.1111	100.037	1.1296	103.370	31
32	1.0741	93.778	1.0926	96.926	1.1111	100.148	1.1296	103.444	1.1481	106.815	32
33	1.0926	97.148	1.1111	100.333	1.1296	103.593	1.1481	106.926	1.1667	110.333	33
34	1.1111	100.593	1.1296	103.815	1.1481	107.111	1.1667	110.481	1.1852	113.926	34
35	1.1296	104.111	1.1481	107.370	1.1667	110.704	1.1852	114.111	1.2047	117.593	35
36	1.1481	107.704	1.1667	111.000	1.1852	114.370	1.2047	117.815	1.2222	121.333	36
37	1.1667	111.370	1.1852	114.704	1.2047	118.111	1.2222	121.593	1.2407	125.148	37
38	1.1852	115.111	1.2047	118.481	1.2222	121.926	1.2407	125.444	1.2593	129.037	38
39	1.2047	118.926	1.2222	122.333	1.2407	125.815	1.2593	129.370	1.2778	133.000	39
40	1.2222	122.815	1.2407	126.259	1.2593	129.778	1.2778	133.370	1.2963	137.037	40
41	1.2407	126.778	1.2593	130.259	1.2778	133.815	1.2963	137.444	1.3148	141.148	41
42	1.2593	130.815	1.2778	134.333	1.2963	137.926	1.3148	141.593	1.3333	145.333	42
43	1.2778	134.926	1.2963	138.481	1.3148	142.111	1.3333	145.815	1.3519	149.593	43
44	1.2963	139.111	1.3148	142.704	1.3333	146.370	1.3519	150.111	1.3704	153.926	44
45	1.3148	143.370	1.3333	147.000	1.3519	150.704	1.3704	154.481	1.3889	158.333	45
46	1.3333	147.704	1.3519	151.370	1.3704	155.111	1.3889	158.926	1.4074	162.815	46
47	1.3519	152.111	1.3704	155.815	1.3889	159.593	1.4074	163.444	1.4259	167.370	47
48	1.3704	156.593	1.3889	160.333	1.4074	164.148	1.4259	168.037	1.4444	172.000	48
49	1.3889	161.148	1.4074	164.926	1.4259	168.778	1.4444	172.704	1.4630	176.704	49
50	1.4074	165.778	1.4259	169.593	1.4444	173.481	1.4630	177.444	1.4815	181.481	50
	26		27		28		29		30		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	31		32		33		34		35		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.5741	35.593	.5926	37.926	.6111	40.333	.6296	42.815	.6481	45.370	0
1	.5926	36.778	.6111	39.148	.6296	41.593	.6481	44.111	.6667	46.704	1
2	.6111	38.037	.6296	40.444	.6481	42.926	.6667	45.481	.6852	48.111	2
3	.6296	39.370	.6481	41.815	.6667	44.333	.6852	46.926	.7037	49.593	3
4	.6481	40.778	.6667	43.259	.6852	45.815	.7037	48.444	.7222	51.148	4
5	.6667	42.259	.6852	44.778	.7037	47.370	.7222	50.037	.7407	52.778	5
6	.6852	43.815	.7037	46.370	.7222	49.000	.7407	51.704	.7593	54.481	6
7	.7037	45.444	.7222	48.037	.7407	50.704	.7593	53.444	.7778	56.259	7
8	.7222	47.148	.7407	49.778	.7593	52.481	.7778	55.259	.7963	58.111	8
9	.7407	48.926	.7593	51.593	.7778	54.333	.7963	57.148	.8148	60.037	9
10	.7593	50.778	.7778	53.481	.7963	56.259	.8148	59.111	.8333	62.037	10
11	.7778	52.704	.7963	55.444	.8148	58.259	.8333	61.148	.8519	64.111	11
12	.7963	54.704	.8148	57.481	.8333	60.333	.8519	63.259	.8704	66.259	12
13	.8148	56.778	.8333	59.593	.8519	62.481	.8704	65.444	.8889	68.481	13
14	.8333	58.926	.8519	61.778	.8704	64.704	.8889	67.704	.9074	70.778	14
15	.8519	61.148	.8704	64.037	.8889	67.000	.9074	70.037	.9259	73.148	15
16	.8704	63.444	.8889	66.370	.9074	69.370	.9259	72.444	.9444	75.593	16
17	.8889	65.815	.9074	68.778	.9259	71.815	.9444	74.926	.9630	78.111	17
18	.9074	68.259	.9259	71.259	.9444	74.333	.9630	77.481	.9815	80.704	18
19	.9259	70.778	.9444	73.815	.9630	76.926	.9815	80.111	1.0000	83.370	19
20	.9444	73.370	.9630	76.444	.9815	79.593	1.0000	82.815	1.0185	86.111	20
21	.9630	76.037	.9815	79.148	1.0000	82.333	1.0185	85.593	1.0370	88.926	21
22	.9815	78.778	1.0000	81.926	1.0185	85.148	1.0370	88.444	1.0556	91.815	22
23	1.0000	81.593	1.0185	84.778	1.0370	88.037	1.0556	91.370	1.0741	94.778	23
24	1.0185	84.481	1.0370	87.704	1.0556	91.000	1.0741	94.370	1.0926	97.815	24
25	1.0370	87.444	1.0556	90.704	1.0741	94.037	1.0926	97.444	1.1111	100.926	25
26	1.0556	90.481	1.0741	93.778	1.0926	97.148	1.1111	100.593	1.1296	104.111	26
27	1.0741	93.593	1.0926	96.926	1.1111	100.333	1.1296	103.815	1.1481	107.370	27
28	1.0926	96.778	1.1111	100.148	1.1296	103.593	1.1481	107.111	1.1667	110.704	28
29	1.1111	100.037	1.1296	103.444	1.1481	106.926	1.1667	110.481	1.1852	114.111	29
30	1.1296	103.370	1.1481	106.815	1.1667	110.333	1.1852	113.926	1.2047	117.593	30
31	1.1481	106.778	1.1667	110.259	1.1852	113.815	1.2047	117.444	1.2222	121.148	31
32	1.1667	110.259	1.1852	113.778	1.2047	117.370	1.2222	121.037	1.2407	124.778	32
33	1.1852	113.815	1.2047	117.370	1.2222	121.000	1.2407	124.704	1.2593	128.481	33
34	1.2047	117.444	1.2222	121.037	1.2407	124.704	1.2593	128.444	1.2778	132.259	34
35	1.2222	121.148	1.2407	124.778	1.2593	128.481	1.2778	132.259	1.2963	136.111	35
36	1.2407	124.926	1.2593	128.593	1.2778	132.333	1.2963	136.148	1.3148	140.037	36
37	1.2593	128.778	1.2778	132.481	1.2963	136.259	1.3148	140.111	1.3333	144.037	37
38	1.2778	132.704	1.2963	136.444	1.3148	140.259	1.3333	144.148	1.3519	148.111	38
39	1.2963	136.704	1.3148	140.481	1.3333	144.333	1.3519	148.259	1.3704	152.259	39
40	1.3148	140.778	1.3333	144.593	1.3519	148.481	1.3704	152.444	1.3889	156.481	40
41	1.3333	144.926	1.3519	148.778	1.3704	152.704	1.3889	156.704	1.4074	160.778	41
42	1.3519	149.148	1.3704	153.037	1.3889	157.000	1.4074	161.037	1.4259	165.148	42
43	1.3704	153.444	1.3889	157.370	1.4074	161.370	1.4259	165.444	1.4444	169.593	43
44	1.3889	157.815	1.4074	161.778	1.4259	165.815	1.4444	169.926	1.4630	174.111	44
45	1.4074	162.259	1.4259	166.259	1.4444	170.333	1.4630	174.481	1.4815	178.704	45
46	1.4259	166.778	1.4444	170.815	1.4630	174.926	1.4815	179.111	1.5000	183.370	46
47	1.4444	171.370	1.4630	175.444	1.4815	179.593	1.5000	183.815	1.5185	188.111	47
48	1.4630	176.037	1.4815	180.148	1.5000	184.333	1.5185	188.593	1.5370	192.926	48
49	1.4815	180.778	1.5000	184.926	1.5185	189.148	1.5370	193.444	1.5556	197.815	49
50	1.5000	185.593	1.5185	189.778	1.5370	194.037	1.5556	198.370	1.5741	202.778	50
	31		32		33		34		35		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	36		37		38		39		40		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.6667	48.000	.6852	50.704	.7037	53.481	.7222	56.333	.7407	59.259	0
1	.6852	49.370	.7037	52.111	.7222	54.926	.7407	57.815	.7593	60.778	1
2	.7037	50.815	.7222	53.593	.7407	56.444	.7593	59.370	.7778	62.370	2
3	.7222	52.333	.7407	55.148	.7593	58.037	.7778	61.000	.7963	64.037	3
4	.7407	53.926	.7593	56.778	.7778	59.704	.7963	62.704	.8148	65.778	4
5	.7593	55.593	.7778	58.481	.7963	61.444	.8148	64.481	.8333	67.593	5
6	.7778	57.333	.7963	60.259	.8148	63.259	.8333	66.333	.8519	69.481	6
7	.7963	59.148	.8148	62.111	.8333	65.148	.8519	68.259	.8704	71.444	7
8	.8148	61.037	.8333	64.037	.8519	67.111	.8704	70.259	.8889	73.481	8
9	.8333	63.000	.8519	66.037	.8704	69.148	.8889	72.333	.9074	75.593	9
10	.8519	65.037	.8704	68.111	.8889	71.259	.9074	74.481	.9259	77.778	10
11	.8704	67.148	.8889	70.259	.9074	73.444	.9259	76.704	.9444	80.037	11
12	.8889	69.333	.9074	72.481	.9259	75.704	.9444	79.000	.9630	82.370	12
13	.9074	71.593	.9259	74.778	.9444	78.037	.9630	81.370	.9815	84.778	13
14	.9259	73.926	.9444	77.148	.9630	80.444	.9815	83.815	1.0000	87.259	14
15	.9444	76.333	.9630	79.593	.9815	82.926	1.0000	86.333	1.0185	89.815	15
16	.9630	78.815	.9815	82.111	1.0000	85.481	1.0185	88.926	1.0370	92.444	16
17	.9815	81.370	1.0000	84.704	1.0185	88.111	1.0370	91.593	1.0556	95.148	17
18	1.0000	84.000	1.0185	87.370	1.0370	90.815	1.0556	94.333	1.0741	97.926	18
19	1.0185	86.704	1.0370	90.111	1.0556	93.593	1.0741	97.148	1.0926	100.778	19
20	1.0370	89.481	1.0556	92.926	1.0741	96.444	1.0926	100.037	1.1111	103.704	20
21	1.0556	92.333	1.0741	95.815	1.0926	99.370	1.1111	103.000	1.1296	106.704	21
22	1.0741	95.259	1.0926	98.778	1.1111	102.370	1.1296	106.037	1.1481	109.778	22
23	1.0926	98.259	1.1111	101.815	1.1296	105.444	1.1481	109.148	1.1667	112.926	23
24	1.1111	101.333	1.1296	104.926	1.1481	108.593	1.1667	112.333	1.1852	116.148	24
25	1.1296	104.481	1.1481	108.111	1.1667	111.815	1.1852	115.593	1.2047	119.444	25
26	1.1481	107.704	1.1667	111.370	1.1852	115.111	1.2047	118.926	1.2222	122.815	26
27	1.1667	111.000	1.1852	114.704	1.2047	118.481	1.2222	122.333	1.2407	126.259	27
28	1.1852	114.370	1.2047	118.111	1.2222	121.926	1.2407	125.815	1.2593	129.778	28
29	1.2047	117.815	1.2222	121.593	1.2407	125.444	1.2593	129.370	1.2778	133.370	29
30	1.2222	121.333	1.2407	125.148	1.2593	129.037	1.2778	133.000	1.2963	137.037	30
31	1.2407	124.926	1.2593	128.778	1.2778	132.704	1.2963	136.704	1.3148	140.778	31
32	1.2593	128.593	1.2778	132.481	1.2963	136.444	1.3148	140.481	1.3333	144.593	32
33	1.2778	132.333	1.2963	136.259	1.3148	140.259	1.3335	144.333	1.3519	148.481	33
34	1.2963	136.148	1.3148	140.111	1.3333	144.148	1.3519	148.259	1.3704	152.444	34
35	1.3148	140.037	1.3333	144.037	1.3519	148.111	1.3704	152.259	1.3889	156.481	35
36	1.3333	144.000	1.3519	148.037	1.3704	152.148	1.3889	156.333	1.4074	160.593	36
37	1.3519	148.037	1.3704	152.111	1.3889	156.259	1.4074	160.481	1.4259	164.778	37
38	1.3704	152.148	1.3889	156.259	1.4074	160.444	1.4259	164.704	1.4444	169.037	38
39	1.3889	156.333	1.4074	160.481	1.4259	164.704	1.4444	169.000	1.4630	173.370	39
40	1.4074	160.593	1.4259	164.778	1.4444	169.037	1.4630	173.370	1.4815	177.778	40
41	1.4259	164.926	1.4444	169.148	1.4630	173.444	1.4815	177.815	1.5000	182.259	41
42	1.4444	169.333	1.4630	173.593	1.4815	177.926	1.5000	182.333	1.5185	186.815	42
43	1.4630	173.815	1.4815	178.111	1.5000	182.481	1.5185	186.926	1.5370	191.444	43
44	1.4815	178.370	1.5000	182.704	1.5185	187.111	1.5370	191.593	1.5556	196.148	44
45	1.5000	183.000	1.5185	187.370	1.5370	191.815	1.5556	196.333	1.5741	200.926	45
46	1.5185	187.704	1.5370	192.111	1.5556	196.593	1.5741	201.148	1.5926	205.778	46
47	1.5370	192.481	1.5556	196.926	1.5741	201.444	1.5926	206.037	1.6111	210.704	47
48	1.5556	197.333	1.5741	201.815	1.5926	206.370	1.6111	211.000	1.6296	215.704	48
49	1.5741	202.259	1.5926	206.778	1.6111	211.370	1.6296	216.037	1.6481	220.778	49
50	1.5926	207.259	1.6111	211.815	1.6296	216.444	1.6481	221.148	1.6667	225.926	50
	36		37		38		39		40		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	41		42		43		44		45		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.7593	62.259	.7778	65.333	.7963	68.481	.8148	71.704	.8333	75.000	0
1	.7778	63.815	.7963	66.926	.8148	70.111	.8333	73.370	.8519	76.704	1
2	.7963	65.444	.8148	68.593	.8333	71.815	.8519	75.111	.8704	78.481	2
3	.8148	67.148	.8333	70.333	.8519	73.593	.8704	76.926	.8889	80.333	3
4	.8333	68.926	.8519	72.148	.8704	75.444	.8889	78.815	.9074	82.259	4
5	.8519	70.778	.8704	74.037	.8889	77.370	.9074	80.778	.9259	84.259	5
6	.8704	72.704	.8889	76.000	.9074	79.370	.9259	82.815	.9444	86.333	6
7	.8889	74.704	.9074	78.037	.9259	81.444	.9444	84.926	.9630	88.481	7
8	.9074	76.778	.9259	80.148	.9444	83.593	.9630	87.111	.9815	90.704	8
9	.9259	78.926	.9444	82.333	.9630	85.815	.9815	89.370	1.0000	93.000	9
10	.9444	81.148	.9630	84.593	.9815	88.111	1.0000	91.704	1.0185	95.370	10
11	.9630	83.444	.9815	86.926	1.0000	90.481	1.0185	94.111	1.0370	97.815	11
12	.9815	85.815	1.0000	89.333	1.0185	92.926	1.0370	96.593	1.0556	100.333	12
13	1.0000	88.259	1.0185	91.815	1.0370	95.444	1.0556	99.148	1.0741	102.926	13
14	1.0185	90.778	1.0370	94.370	1.0556	98.037	1.0741	101.778	1.0926	105.593	14
15	1.0370	93.370	1.0556	97.000	1.0741	100.704	1.0926	104.481	1.1111	108.333	15
16	1.0556	96.037	1.0741	99.704	1.0926	103.444	1.1111	107.259	1.1296	111.148	16
17	1.0741	98.778	1.0926	102.481	1.1111	106.259	1.1296	110.111	1.1481	114.037	17
18	1.0926	101.593	1.1111	105.333	1.1296	109.148	1.1481	113.037	1.1667	117.000	18
19	1.1111	104.481	1.1296	108.259	1.1481	112.111	1.1667	116.037	1.1852	120.037	19
20	1.1296	107.444	1.1481	111.259	1.1667	115.148	1.1852	119.111	1.2047	123.148	20
21	1.1481	110.481	1.1667	114.333	1.1852	118.259	1.2047	122.259	1.2222	126.333	21
22	1.1667	113.593	1.1852	117.481	1.2047	121.444	1.2222	125.481	1.2407	129.593	22
23	1.1852	116.778	1.2047	120.704	1.2222	124.704	1.2407	128.778	1.2593	132.926	23
24	1.2047	120.037	1.2222	124.000	1.2407	128.037	1.2593	132.148	1.2778	136.333	24
25	1.2222	123.370	1.2407	127.370	1.2593	131.444	1.2778	135.593	1.2963	139.815	25
26	1.2407	126.778	1.2593	130.815	1.2778	134.926	1.2963	139.111	1.3148	143.370	26
27	1.2593	130.259	1.2778	134.333	1.2963	138.481	1.3148	142.704	1.3333	147.000	27
28	1.2778	133.815	1.2963	137.926	1.3148	142.111	1.3333	146.370	1.3519	150.704	28
29	1.2963	137.444	1.3148	141.593	1.3333	145.815	1.3519	150.111	1.3704	154.481	29
30	1.3148	141.148	1.3333	145.333	1.3519	149.593	1.3704	153.926	1.3889	158.333	30
31	1.3333	144.926	1.3519	149.148	1.3704	153.444	1.3889	157.815	1.4074	162.259	31
32	1.3519	148.778	1.3704	153.037	1.3889	157.370	1.4074	161.778	1.4259	166.259	32
33	1.3704	152.704	1.3889	157.000	1.4074	161.370	1.4259	165.815	1.4444	170.333	33
34	1.3889	156.704	1.4074	161.037	1.4259	165.444	1.4444	169.926	1.4630	174.481	34
35	1.4074	160.778	1.4259	165.148	1.4444	169.593	1.4630	174.111	1.4815	178.704	35
36	1.4259	164.926	1.4444	169.333	1.4630	173.815	1.4815	178.370	1.5000	183.000	36
37	1.4444	169.148	1.4630	173.593	1.4815	178.111	1.5000	182.704	1.5185	187.370	37
38	1.4630	173.444	1.4815	177.926	1.5000	182.481	1.5185	187.111	1.5370	191.815	38
39	1.4815	177.815	1.5000	182.333	1.5185	186.926	1.5370	191.593	1.5556	196.333	39
40	1.5000	182.259	1.5185	186.815	1.5370	191.444	1.5556	196.148	1.5741	200.926	40
41	1.5185	186.778	1.5370	191.370	1.5556	196.037	1.5741	200.778	1.5926	205.593	41
42	1.5370	191.370	1.5556	196.000	1.5741	200.704	1.5926	205.481	1.6111	210.333	42
43	1.5556	196.037	1.5741	200.704	1.5926	205.444	1.6111	210.259	1.6296	215.148	43
44	1.5741	200.778	1.5926	205.481	1.6111	210.259	1.6296	215.111	1.6481	220.037	44
45	1.5926	205.593	1.6111	210.333	1.6296	215.148	1.6481	220.037	1.6667	225.000	45
46	1.6111	210.481	1.6296	215.259	1.6481	220.111	1.6667	225.037	1.6852	230.037	46
47	1.6296	215.444	1.6481	220.259	1.6667	225.148	1.6852	230.111	1.7037	235.148	47
48	1.6481	220.481	1.6667	225.333	1.6852	230.259	1.7037	235.259	1.7222	240.333	48
49	1.6667	225.593	1.6852	230.481	1.7037	235.444	1.7222	240.481	1.7407	245.593	49
50	1.6852	230.778	1.7037	235.704	1.7222	240.704	1.7407	245.778	1.7593	250.926	50
	41		42		43		44		45		

TABLE XXXIII.—BASE 1—SLOPES 3 to 1.

Feet.	46		47		48		49		50		Feet.
	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	Mult.	Add.	
0	.8519	78.370	.8704	81.815	.8889	85.333	.9074	88.926	.9259	92.593	0
1	.8704	80.111	.8889	83.593	.9074	87.148	.9259	90.778	.9444	94.481	1
2	.8889	81.926	.9074	85.444	.9259	89.037	.9444	92.704	.9630	96.444	2
3	.9074	83.815	.9259	87.370	.9444	91.000	.9630	94.704	.9815	98.481	3
4	.9259	85.778	.9444	89.370	.9630	93.037	.9815	96.778	1.0000	100.593	4
5	.9444	87.815	.9630	91.444	.9815	95.148	1.0000	98.926	1.0185	102.778	5
6	.9630	89.926	.9815	93.593	1.0000	97.333	1.0185	101.148	1.0370	105.037	6
7	.9815	92.111	1.0000	95.815	1.0185	99.593	1.0370	103.444	1.0556	107.370	7
8	1.0000	94.370	1.0185	98.111	1.0370	101.926	1.0556	105.815	1.0741	109.778	8
9	1.0185	96.704	1.0370	100.481	1.0556	104.333	1.0741	108.259	1.0926	112.259	9
10	1.0370	99.111	1.0556	102.926	1.0741	106.815	1.0926	110.778	1.1111	114.815	10
11	1.0556	101.593	1.0741	105.444	1.0926	109.370	1.1111	113.370	1.1296	117.444	11
12	1.0741	104.148	1.0926	108.037	1.1111	112.000	1.1296	116.037	1.1481	120.148	12
13	1.0926	106.778	1.1111	110.704	1.1296	114.704	1.1481	118.778	1.1667	122.926	13
14	1.1111	109.481	1.1296	113.444	1.1481	117.481	1.1667	121.593	1.1852	125.778	14
15	1.1296	112.259	1.1481	116.259	1.1667	120.333	1.1852	124.481	1.2047	128.704	15
16	1.1481	115.111	1.1667	119.148	1.1852	123.259	1.2047	127.444	1.2222	131.704	16
17	1.1667	118.037	1.1852	122.111	1.2047	126.259	1.2222	130.481	1.2407	134.778	17
18	1.1852	121.037	1.2047	125.148	1.2222	129.333	1.2407	133.593	1.2593	137.926	18
19	1.2047	124.111	1.2222	128.259	1.2407	132.481	1.2593	136.778	1.2778	141.148	19
20	1.2222	127.259	1.2407	131.444	1.2593	135.704	1.2778	140.037	1.2963	144.444	20
21	1.2407	130.481	1.2593	134.704	1.2778	139.000	1.2963	143.370	1.3148	147.815	21
22	1.2593	133.778	1.2778	138.037	1.2963	142.370	1.3148	146.778	1.3333	151.259	22
23	1.2778	137.148	1.2963	141.444	1.3148	145.815	1.3333	150.259	1.3519	154.778	23
24	1.2963	140.593	1.3148	144.926	1.3333	149.333	1.3519	153.815	1.3704	158.370	24
25	1.3148	144.111	1.3333	148.481	1.3519	152.926	1.3704	157.444	1.3889	162.037	25
26	1.3333	147.704	1.3519	152.111	1.3704	156.593	1.3889	161.148	1.4074	165.778	26
27	1.3519	151.370	1.3704	155.815	1.3889	160.333	1.4074	164.926	1.4259	169.593	27
28	1.3704	155.111	1.3889	159.593	1.4074	164.148	1.4259	168.778	1.4444	173.481	28
29	1.3889	158.926	1.4074	163.444	1.4259	168.037	1.4444	172.704	1.4630	177.444	29
30	1.4074	162.815	1.4259	167.370	1.4444	172.000	1.4630	176.704	1.4815	181.481	30
31	1.4259	166.778	1.4444	171.370	1.4630	176.037	1.4815	180.778	1.5000	185.593	31
32	1.4444	170.815	1.4630	175.444	1.4815	180.148	1.5000	184.926	1.5185	189.778	32
33	1.4630	174.926	1.4815	179.593	1.5000	184.333	1.5185	189.148	1.5370	194.037	33
34	1.4815	179.111	1.5000	183.815	1.5185	188.593	1.5370	193.444	1.5556	198.370	34
35	1.5000	183.370	1.5185	188.111	1.5370	192.926	1.5556	197.815	1.5741	202.778	35
36	1.5185	187.704	1.5370	192.481	1.5556	197.333	1.5741	202.259	1.5926	207.259	36
37	1.5370	192.111	1.5556	196.926	1.5741	201.815	1.5926	206.778	1.6111	211.815	37
38	1.5556	196.593	1.5741	201.444	1.5926	206.370	1.6111	211.370	1.6296	216.444	38
39	1.5741	201.148	1.5926	206.037	1.6111	211.000	1.6296	216.037	1.6481	221.148	39
40	1.5926	205.778	1.6111	210.704	1.6296	215.704	1.6481	220.778	1.6667	225.926	40
41	1.6111	210.481	1.6296	215.444	1.6481	220.481	1.6667	225.593	1.6852	230.778	41
42	1.6296	215.259	1.6481	220.259	1.6667	225.333	1.6852	230.481	1.7037	235.704	42
43	1.6481	220.111	1.6667	225.148	1.6852	230.259	1.7037	235.444	1.7222	240.704	43
44	1.6667	225.037	1.6852	230.111	1.7037	235.259	1.7222	240.481	1.7407	245.778	44
45	1.6852	230.037	1.7037	235.148	1.7222	240.333	1.7407	245.593	1.7593	250.926	45
46	1.7037	235.111	1.7222	240.259	1.7407	245.481	1.7593	250.778	1.7778	256.148	46
47	1.7222	240.259	1.7407	245.444	1.7593	250.704	1.7778	256.037	1.7963	261.444	47
48	1.7407	245.481	1.7593	250.704	1.7778	256.000	1.7963	261.370	1.8148	266.815	48
49	1.7593	250.778	1.7778	256.037	1.7963	261.370	1.8148	266.778	1.8333	272.259	49
50	1.7778	256.148	1.7963	261.444	1.8148	266.815	1.8333	272.259	1.8519	277.778	50
	46		47		48		49		50		

THIRD SERIES

OF

TABLES.

Slopes from 1 *to* 1—*to* 3 *to* 1,

BASE 31.

TABLE XXXIV.—BASE 31—SLOPES 1 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.59	1.20	1.83	2.49	3.18	3.89	4.62	5.38	6.17	6.98	0
1	1.19	1.81	2.46	3.13	3.83	4.55	5.30	6.07	6.86	7.69	1
2	1.81	2.44	3.10	3.79	4.50	5.23	5.99	6.78	7.59	8.42	2
3	2.46	3.10	3.78	4.48	5.20	5.94	6.72	7.51	8.33	9.18	3
4	3.13	3.79	4.48	5.19	5.92	6.68	7.46	8.27	9.10	9.96	4
5	3.83	4.50	5.20	5.92	6.67	7.44	8.23	9.06	9.90	10.77	5
6	4.55	5.23	5.94	6.68	7.44	8.22	9.03	9.86	10.72	11.60	6
7	5.30	5.99	6.72	7.46	8.23	9.03	9.85	10.70	11.57	12.46	7
8	6.07	6.78	7.51	8.27	9.06	9.86	10.70	11.56	12.44	13.35	8
9	6.86	7.59	8.33	9.10	9.90	10.72	11.57	12.44	13.33	14.25	9
10	7.69	8.42	9.18	9.96	10.77	11.60	12.46	13.35	14.25	15.19	10
11	8.53	9.28	10.05	10.85	11.67	12.51	13.38	14.28	15.20	16.14	11
12	9.40	10.16	10.94	11.75	12.59	13.44	14.33	15.23	16.17	17.12	12
13	10.30	11.07	11.86	12.69	13.53	14.40	15.30	16.22	17.16	18.13	13
14	11.22	12.00	12.81	13.64	14.50	15.38	16.29	17.22	18.18	19.16	14
15	12.16	12.96	13.78	14.62	15.49	16.39	17.31	18.25	19.22	20.22	15
16	13.13	13.94	14.77	15.63	16.51	17.42	18.35	19.31	20.29	21.30	16
17	14.12	14.94	15.79	16.66	17.56	18.48	19.42	20.39	21.38	22.40	17
18	15.14	15.98	16.83	17.72	18.62	19.56	20.51	21.49	22.50	23.53	18
19	16.19	17.03	17.90	18.80	19.72	20.66	21.63	22.62	23.64	24.69	19
20	17.25	18.11	18.99	19.90	20.83	21.79	22.77	23.78	24.81	25.86	20
21	18.35	19.22	20.11	21.03	21.98	22.94	23.94	24.96	26.00	27.07	21
22	19.46	20.35	21.25	22.19	23.14	24.12	25.13	26.16	27.22	28.30	22
23	20.60	21.50	22.42	23.36	24.33	25.33	26.35	27.39	28.46	29.55	23
24	21.77	22.68	23.61	24.57	25.55	26.56	27.59	28.64	29.72	30.83	24
25	22.96	23.88	24.83	25.80	26.79	27.81	28.85	29.92	31.01	32.13	25
26	24.18	25.11	26.07	27.05	28.06	29.09	30.14	31.22	32.33	33.46	26
27	25.42	26.36	27.33	28.33	29.35	30.39	31.46	32.55	33.67	34.81	27
28	26.69	27.64	28.62	29.63	30.66	31.72	32.80	33.90	35.03	36.19	28
29	27.98	28.94	29.94	30.96	32.00	33.07	34.16	35.28	36.42	37.59	29
30	29.29	30.27	31.28	32.31	33.36	34.44	35.55	36.68	37.83	39.01	30
31	30.63	31.62	32.64	33.69	34.75	35.85	36.96	38.10	39.27	40.46	31
32	31.99	33.00	34.03	35.09	36.17	37.27	38.40	39.56	40.73	41.94	32
33	33.38	34.40	35.44	36.51	37.60	38.72	39.86	41.03	42.22	43.44	33
34	34.80	35.83	36.88	37.96	39.07	40.20	41.35	42.53	43.73	44.96	34
35	36.23	37.28	38.35	39.44	40.56	41.70	42.86	44.06	45.27	46.51	35
36	37.70	38.75	39.83	40.94	42.07	43.22	44.40	45.60	46.83	48.09	36
37	39.19	40.25	41.35	42.46	43.60	44.77	45.96	47.18	48.42	49.69	37
38	40.70	41.78	42.88	44.01	45.17	46.35	47.55	48.78	50.03	51.31	38
39	42.23	43.33	44.44	45.59	46.75	47.94	49.16	50.40	51.67	52.96	39
40	43.80	44.90	46.03	47.19	48.36	49.57	50.80	52.05	53.33	54.63	40
41	45.38	46.50	47.64	48.81	50.00	51.22	52.46	53.72	55.01	56.33	41
42	46.99	48.12	49.28	50.46	51.66	52.89	54.14	55.42	56.72	58.05	42
43	48.63	49.77	50.94	52.13	53.35	54.59	55.85	57.14	58.46	59.80	43
44	50.29	51.44	52.62	53.83	55.06	56.31	57.59	58.89	60.22	61.57	44
45	51.98	53.14	54.33	55.55	56.79	58.06	59.35	60.66	62.00	63.36	45
46	53.69	54.86	56.07	57.30	58.55	59.83	61.13	62.46	63.81	65.19	46
47	55.42	56.61	57.83	59.07	60.33	61.62	62.94	64.28	65.64	67.03	47
48	57.18	58.38	59.61	60.86	62.14	63.44	64.77	66.12	67.50	68.90	48
49	58.96	60.18	61.42	62.69	63.98	65.29	66.63	67.99	69.38	70.80	49
50	60.77	62.00	63.25	64.53	65.83	67.16	68.51	69.89	71.29	72.72	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XXXIV.—BASE 31—SLOPES 1 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	7.81	8.67	9.55	10.46	11.39	12.35	13.33	14.33	15.36	16.42	0
1	8.53	9.40	10.30	11.22	12.16	13.13	14.12	15.14	16.19	17.25	1
2	9.28	10.16	11.07	12.00	12.96	13.94	14.94	15.98	17.03	18.11	2
3	10.05	10.94	11.86	12.81	13.78	14.77	15.79	16.83	17.90	18.99	3
4	10.85	11.75	12.69	13.64	14.62	15.63	16.66	17.72	18.80	19.90	4
5	11.67	12.59	13.53	14.50	15.49	16.51	17.56	18.62	19.72	20.83	5
6	12.51	13.44	14.40	15.38	16.39	17.42	18.48	19.56	20.66	21.79	6
7	13.38	14.33	15.30	16.29	17.31	18.35	19.42	20.51	21.63	22.77	7
8	14.28	15.23	16.22	17.22	18.25	19.31	20.39	21.49	22.62	23.78	8
9	15.20	16.17	17.16	18.18	19.22	20.29	21.38	22.50	23.64	24.81	9
10	16.14	17.12	18.13	19.16	20.22	21.30	22.40	23.53	24.69	25.86	10
11	17.11	18.10	19.12	20.17	21.23	22.33	23.44	24.59	25.75	26.94	11
12	18.10	19.11	20.14	21.20	22.28	23.38	24.51	25.67	26.85	28.05	12
13	19.12	20.14	21.19	22.25	23.35	24.46	25.60	26.77	27.96	29.18	13
14	20.17	21.20	22.25	23.33	24.44	25.57	26.72	27.90	29.10	30.33	14
15	21.23	22.28	23.35	24.44	25.56	26.70	27.86	29.06	30.27	31.51	15
16	22.33	23.38	24.46	25.57	26.70	27.85	29.03	30.23	31.46	32.72	16
17	23.44	24.51	25.60	26.72	27.86	29.03	30.22	31.44	32.68	33.94	17
18	24.59	25.67	26.77	27.90	29.06	30.23	31.44	32.67	33.92	35.20	18
19	25.75	26.85	27.96	29.10	30.27	31.46	32.68	33.92	35.19	36.48	19
20	26.94	28.05	29.18	30.33	31.51	32.72	33.94	35.20	36.48	37.78	20
21	28.16	29.28	30.42	31.59	32.78	33.99	35.23	36.50	37.79	39.10	21
22	29.40	30.53	31.69	32.86	34.07	35.30	36.55	37.83	39.13	40.46	22
23	30.67	31.81	32.98	34.17	35.38	36.62	37.89	39.18	40.49	41.83	23
24	31.96	33.11	34.29	35.49	36.72	37.98	39.25	40.56	41.88	43.23	24
25	33.27	34.44	35.63	36.85	38.09	39.35	40.64	41.96	43.30	44.66	25
26	34.61	35.79	36.99	38.22	39.48	40.75	42.06	43.38	44.73	46.11	26
27	35.98	37.17	38.38	39.62	40.89	42.18	43.49	44.83	46.20	47.59	27
28	37.36	38.57	39.80	41.05	42.33	43.63	44.96	46.31	47.69	49.09	28
29	38.78	39.99	41.23	42.50	43.79	45.10	46.44	47.81	49.20	50.61	29
30	40.22	41.44	42.70	43.98	45.28	46.60	47.96	49.33	50.73	52.16	30
31	41.68	42.92	44.19	45.48	46.79	48.13	49.49	50.88	52.30	53.73	31
32	43.17	44.42	45.70	47.00	48.33	49.68	51.06	52.46	53.88	55.33	32
33	44.68	45.94	47.23	48.55	49.89	51.25	52.64	54.06	55.49	56.96	33
34	46.22	47.49	48.80	50.12	51.48	52.85	54.25	55.68	57.13	58.60	34
35	47.78	49.07	50.38	51.72	53.09	54.48	55.89	57.33	58.79	60.28	35
36	49.36	50.67	51.99	53.35	54.72	56.12	57.55	59.00	60.48	61.98	36
37	50.98	52.29	53.63	54.99	56.38	57.80	59.23	60.70	62.19	63.70	37
38	52.61	53.94	55.29	56.67	58.07	59.49	60.94	62.42	63.92	65.44	38
39	54.27	55.61	56.98	58.36	59.78	61.22	62.68	64.17	65.68	67.22	39
40	55.96	57.31	58.69	60.09	61.51	62.96	64.44	65.94	67.46	69.01	40
41	57.67	59.03	60.42	61.83	63.27	64.73	66.22	67.73	69.27	70.83	41
42	59.40	60.78	62.18	63.60	65.06	66.53	68.03	69.56	71.10	72.68	42
43	61.16	62.55	63.96	65.40	66.86	68.35	69.86	71.40	72.96	74.55	43
44	62.94	64.35	65.77	67.22	68.70	70.20	71.72	73.27	74.85	76.44	44
45	64.75	66.17	67.60	69.07	70.56	72.07	73.60	75.17	76.75	78.36	45
46	66.59	68.01	69.46	70.94	72.44	73.96	75.51	77.09	78.69	80.31	46
47	68.44	69.88	71.35	72.83	74.35	75.88	77.44	79.03	80.64	82.28	47
48	70.33	71.78	73.25	74.75	76.28	77.83	79.40	81.00	82.62	84.27	48
49	72.23	73.70	75.19	76.70	78.23	79.80	81.38	82.99	84.63	86.29	49
50	74.17	75.64	77.14	78.67	80.22	81.79	83.39	85.01	86.66	88.33	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XXXIV.—BASE 31—SLOPES 1 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	17.50	18.60	19.73	20.89	22.07	23.27	24.50	25.75	27.03	28.33	0
1	18.35	19.46	20.60	21.77	22.96	24.18	25.42	26.69	27.98	29.29	1
2	19.22	20.35	21.50	22.68	23.88	25.11	26.36	27.64	28.94	30.27	2
3	20.11	21.25	22.42	23.61	24.83	26.07	27.33	28.62	29.94	31.28	3
4	21.03	22.19	23.36	24.57	25.80	27.05	28.33	29.63	30.96	32.31	4
5	21.98	23.14	24.33	25.55	26.79	28.06	29.35	30.66	32.00	33.36	5
6	22.94	24.12	25.33	26.56	27.81	29.09	30.39	31.72	33.07	34.44	6
7	23.94	25.13	26.35	27.59	28.85	30.14	31.46	32.80	34.16	35.55	7
8	24.96	26.16	27.39	28.64	29.92	31.22	32.55	33.90	35.28	36.68	8
9	26.00	27.22	28.46	29.72	31.01	32.33	33.67	35.03	36.42	37.83	9
10	27.07	28.30	29.55	30.83	32.13	33.46	34.81	36.19	37.59	39.01	10
11	28.16	29.40	30.67	31.96	33.27	34.61	35.98	37.36	38.78	40.22	11
12	29.28	30.53	31.81	33.11	34.44	35.79	37.17	38.57	39.99	41.44	12
13	30.42	31.69	32.98	34.29	35.63	36.99	38.38	39.80	41.23	42.70	13
14	31.59	32.86	34.17	35.49	36.85	38.22	39.62	41.05	42.50	43.98	14
15	32.78	34.07	35.38	36.72	38.09	39.48	40.89	42.33	43.79	45.28	15
16	33.99	35.30	36.62	37.98	39.35	40.75	42.18	43.63	45.10	46.60	16
17	35.23	36.55	37.89	39.25	40.64	42.06	43.49	44.96	46.44	47.96	17
18	36.50	37.83	39.18	40.56	41.96	43.38	44.83	46.31	47.81	49.33	18
19	37.79	39.13	40.49	41.88	43.30	44.73	46.20	47.69	49.20	50.73	19
20	39.10	40.46	41.83	43.23	44.66	46.11	47.59	49.09	50.61	52.16	20
21	40.44	41.81	43.20	44.61	46.05	47.51	49.00	50.51	52.05	53.61	21
22	41.81	43.19	44.59	46.01	47.46	48.94	50.44	51.96	53.51	55.09	22
23	43.20	44.59	46.00	47.44	48.90	50.39	51.90	53.44	55.00	56.59	23
24	44.61	46.01	47.44	48.89	50.36	51.86	53.39	54.94	56.51	58.11	24
25	46.05	47.46	48.90	50.36	51.85	53.36	54.90	56.46	58.05	59.66	25
26	47.51	48.94	50.39	51.86	53.36	54.89	56.44	58.01	59.61	61.23	26
27	49.00	50.44	51.90	53.39	54.90	56.44	58.00	59.59	61.20	62.83	27
28	50.51	51.96	53.44	54.94	56.46	58.01	59.59	61.19	62.81	64.46	28
29	52.05	53.51	55.00	56.51	58.05	59.61	61.20	62.81	64.44	66.10	29
30	53.61	55.09	56.59	58.11	59.66	61.23	62.83	64.46	66.10	67.78	30
31	55.20	56.69	58.20	59.73	61.30	62.88	64.49	66.13	67.79	69.48	31
32	56.81	58.31	59.83	61.38	62.96	64.56	66.18	67.83	69.50	71.20	32
33	58.44	59.96	61.49	63.06	64.64	66.25	67.89	69.55	71.23	72.94	33
34	60.10	61.63	63.18	64.75	66.35	67.98	69.62	71.30	72.99	74.72	34
35	61.79	63.33	64.89	66.48	68.09	69.72	71.38	73.07	74.78	76.51	35
36	63.50	65.05	66.62	68.22	69.85	71.49	73.17	74.86	76.59	78.33	36
37	65.23	66.80	68.38	69.99	71.63	73.29	74.98	76.69	78.42	80.18	37
38	66.99	68.57	70.17	71.79	73.44	75.11	76.81	78.53	80.28	82.05	38
39	68.78	70.36	71.98	73.61	75.27	76.96	78.67	80.40	82.16	83.94	39
40	70.59	72.19	73.81	75.46	77.13	78.83	80.55	82.30	84.07	85.86	40
41	72.42	74.03	75.67	77.33	79.01	80.72	82.46	84.22	86.00	87.81	41
42	74.28	75.90	77.55	79.22	80.92	82.64	84.39	86.16	87.96	89.78	42
43	76.16	77.80	79.46	81.14	82.85	84.59	86.35	88.13	89.94	91.77	43
44	78.07	79.72	81.39	83.09	84.81	86.56	88.33	90.12	91.94	93.79	44
45	80.00	81.66	83.35	85.06	86.79	88.55	90.33	92.14	93.98	95.83	45
46	81.96	83.63	85.33	87.05	88.80	90.57	92.36	94.19	96.03	97.90	46
47	83.94	85.62	87.33	89.07	90.83	92.61	94.42	96.25	98.11	99.99	47
48	85.94	87.64	89.36	91.11	92.88	94.68	96.50	98.35	100.22	102.11	48
49	87.98	89.69	91.42	93.18	94.96	96.77	98.60	100.46	102.35	104.25	49
50	90.03	91.75	93.50	95.27	97.07	98.89	100.73	102.60	104.50	106.42	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XXXIV.—BASE 31—SLOPES 1 to 1.

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	29.66	31.01	32.39	33.79	35.22	36.67	38.14	39.64	41.17	42.72	0
1	30.65	31.99	33.38	34.80	36.23	37.70	39.19	40.70	42.23	43.80	1
2	31.62	33.00	34.40	35.83	37.28	38.75	40.25	41.78	43.33	44.90	2
3	32.64	34.03	35.44	36.88	38.35	39.83	41.35	42.88	44.44	46.03	3
4	33.69	35.09	36.51	37.96	39.44	40.94	42.46	44.01	45.59	47.19	4
5	34.75	36.17	37.60	39.07	40.56	42.07	43.60	45.17	46.75	48.36	5
6	35.85	37.27	38.72	40.20	41.70	43.22	44.77	46.35	47.94	49.57	6
7	36.96	38.40	39.86	41.35	42.86	44.40	45.96	47.55	49.16	50.80	7
8	38.10	39.56	41.03	42.53	44.06	45.60	47.18	48.78	50.40	52.05	8
9	39.27	40.73	42.22	43.73	45.27	46.83	48.42	50.03	51.67	53.33	9
10	40.46	41.94	43.44	44.96	46.51	48.09	49.69	51.31	52.96	54.63	10
11	41.68	43.17	44.68	46.22	47.78	49.36	50.98	52.61	54.27	55.96	11
12	42.92	44.42	45.94	47.49	49.07	50.67	52.29	53.94	55.61	57.31	12
13	44.19	45.70	47.23	48.80	50.38	51.99	53.63	55.29	56.98	58.69	13
14	45.48	47.00	48.55	50.12	51.72	53.35	54.99	56.67	58.36	60.09	14
15	46.79	48.33	49.89	51.48	53.09	54.72	56.38	58.07	59.78	61.51	15
16	48.13	49.68	51.25	52.85	54.48	56.12	57.80	59.49	61.22	62.96	16
17	49.49	51.06	52.64	54.25	55.89	57.55	59.23	60.94	62.68	64.44	17
18	50.88	52.46	54.06	55.68	57.33	59.00	60.70	62.42	64.17	65.94	18
19	52.30	53.88	55.49	57.13	58.79	60.48	62.19	63.92	65.68	67.46	19
20	53.73	55.33	56.96	58.60	60.28	61.98	63.70	65.44	67.22	69.01	20
21	55.20	56.81	58.44	60.10	61.79	63.50	65.23	66.99	68.78	70.59	21
22	56.69	58.31	59.96	61.63	63.33	65.05	66.80	68.57	70.36	72.19	22
23	58.20	59.83	61.49	63.18	64.89	66.62	68.38	70.17	71.98	73.81	23
24	59.73	61.38	63.06	64.75	66.48	68.22	69.99	71.79	73.61	75.46	24
25	61.30	62.96	64.64	66.35	68.09	69.85	71.63	73.44	75.27	77.13	25
26	62.88	64.56	66.25	67.98	69.72	71.49	73.29	75.11	76.96	78.83	26
27	64.49	66.18	67.89	69.62	71.38	73.17	74.98	76.81	78.67	80.55	27
28	66.13	67.83	69.55	71.30	73.07	74.86	76.69	78.53	80.40	82.30	28
29	67.79	69.50	71.23	72.99	74.78	76.59	78.42	80.28	82.16	84.07	29
30	69.48	71.20	72.94	74.72	76.51	78.33	80.18	82.05	83.94	85.86	30
31	71.19	72.92	74.68	76.46	78.27	80.10	81.96	83.85	85.75	87.69	31
32	72.92	74.67	76.44	78.23	80.06	81.90	83.77	85.67	87.59	89.53	32
33	74.68	76.44	78.22	80.03	81.86	83.72	85.60	87.51	89.44	91.40	33
34	76.46	78.23	80.03	81.85	83.70	85.57	87.46	89.38	91.33	93.30	34
35	78.27	80.06	81.86	83.70	85.56	87.44	89.35	91.28	93.23	95.22	35
36	80.10	81.90	83.72	85.57	87.44	89.33	91.25	93.20	95.17	97.16	36
37	81.96	83.77	85.60	87.46	89.35	91.25	93.19	95.14	97.12	99.13	37
38	83.85	85.67	87.51	89.38	91.28	93.20	95.14	97.11	99.10	101.12	38
39	85.75	87.59	89.44	91.33	93.23	95.17	97.12	99.10	101.11	103.14	39
40	87.69	89.53	91.40	93.30	95.22	97.16	99.13	101.12	103.14	105.19	40
41	89.64	91.50	93.38	95.29	97.22	99.18	101.16	103.17	105.20	107.25	41
42	91.62	93.49	95.39	97.31	99.25	101.22	103.22	105.23	107.28	109.35	42
43	93.63	95.51	97.42	99.35	101.31	103.29	105.30	107.33	109.38	111.46	43
44	95.66	97.56	99.48	101.42	103.39	105.38	107.40	109.44	111.51	113.60	44
45	97.72	99.62	101.56	103.51	105.49	107.50	109.53	111.59	113.67	115.77	45
46	99.80	101.72	103.66	105.63	107.62	109.64	111.69	113.75	115.85	117.96	46
47	101.90	103.83	105.79	107.77	109.78	111.81	113.86	115.94	118.05	120.18	47
48	104.03	105.98	107.94	109.94	111.96	114.00	116.07	118.16	120.28	122.42	48
49	106.19	108.14	110.12	112.13	114.16	116.22	118.30	120.40	122.53	124.69	49
50	108.36	110.33	112.33	114.35	116.39	118.46	120.55	122.67	124.81	126.98	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XXXIV.—BASE 31—SLOPES 1 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	44.29	45.89	47.51	49.16	50.83	52.53	54.25	56.00	57.77	59.57	0
1	45.38	46.99	48.63	50.29	51.98	53.69	55.42	57.18	58.96	60.77	1
2	46.50	48.12	49.77	51.44	53.14	54.86	56.61	58.38	60.18	62.00	2
3	47.64	49.28	50.94	52.62	54.33	56.07	57.83	59.61	61.42	63.25	3
4	48.81	50.46	52.13	53.83	55.55	57.30	59.07	60.86	62.69	64.53	4
5	50.00	51.66	53.35	55.06	56.79	58.55	60.33	62.14	63.98	65.83	5
6	51.22	52.89	54.59	56.31	58.06	59.83	61.62	63.44	65.29	67.16	6
7	52.46	54.14	55.85	57.59	59.35	61.13	62.94	64.77	66.63	68.51	7
8	53.72	55.42	57.14	58.89	60.66	62.46	64.28	66.12	67.99	69.89	8
9	55.01	56.72	58.46	60.22	62.00	63.81	65.64	67.50	69.38	71.29	9
10	56.33	58.05	59.80	61.57	63.36	65.19	67.03	68.90	70.80	72.72	10
11	57.67	59.40	61.16	62.94	64.75	66.59	68.44	70.33	72.23	74.17	11
12	59.03	60.78	62.55	64.35	66.17	68.01	69.88	71.78	73.70	75.64	12
13	60.42	62.18	63.96	65.77	67.60	69.46	71.35	73.25	75.19	77.14	13
14	61.83	63.60	65.40	67.22	69.07	70.94	72.83	74.75	76.70	78.67	14
15	63.27	65.06	66.86	68.70	70.56	72.44	74.35	76.28	78.23	80.22	15
16	64.73	66.53	68.35	70.20	72.07	73.96	75.88	77.83	79.80	81.79	16
17	66.22	68.03	69.86	71.72	73.60	75.51	77.44	79.40	81.38	83.39	17
18	67.73	69.56	71.40	73.27	75.17	77.09	79.03	81.00	82.99	85.01	18
19	69.27	71.10	72.96	74.85	76.75	78.69	80.64	82.62	84.63	86.66	19
20	70.83	72.68	74.55	76.44	78.36	80.31	82.28	84.27	86.29	88.33	20
21	72.42	74.28	76.16	78.07	80.00	81.96	83.94	85.94	87.98	90.03	21
22	74.03	75.90	77.80	79.72	81.66	83.63	85.62	87.64	89.69	91.75	22
23	75.67	77.55	79.46	81.39	83.35	85.33	87.33	89.36	91.42	93.50	23
24	77.33	79.22	81.14	83.09	85.06	87.05	89.07	91.11	93.18	95.27	24
25	79.01	80.92	82.85	84.81	86.79	88.80	90.83	92.88	94.96	97.07	25
26	80.72	82.64	84.59	86.56	88.55	90.57	92.61	94.68	96.77	98.89	26
27	82.46	84.39	86.35	88.33	90.33	92.36	94.42	96.50	98.60	100.73	27
28	84.22	86.16	88.13	90.12	92.14	94.19	96.25	98.35	100.46	102.60	28
29	86.00	87.96	89.94	91.94	93.98	96.03	98.11	100.22	102.35	104.50	29
30	87.81	89.78	91.77	93.79	95.83	97.90	99.99	102.11	104.25	106.42	30
31	89.64	91.62	93.63	95.66	97.72	99.80	101.90	104.03	106.19	108.36	31
32	91.50	93.49	95.51	97.56	99.62	101.72	103.83	105.98	108.14	110.33	32
33	93.38	95.39	97.42	99.48	101.56	103.66	105.79	107.94	110.12	112.33	33
34	95.29	97.31	99.35	101.42	103.51	105.63	107.77	109.94	112.13	114.35	34
35	97.22	99.25	101.31	103.39	105.49	107.62	109.78	111.96	114.16	116.39	35
36	99.18	101.22	103.29	105.38	107.50	109.64	111.81	114.00	116.22	118.46	36
37	101.16	103.22	105.30	107.40	109.53	111.69	113.86	116.07	118.30	120.55	37
38	103.17	105.23	107.33	109.44	111.59	113.75	115.94	118.16	120.40	122.67	38
39	105.20	107.28	109.38	111.51	113.67	115.85	118.05	120.28	122.53	124.81	39
40	107.25	109.35	111.46	113.60	115.77	117.96	120.18	122.42	124.69	126.98	40
41	109.33	111.44	113.57	115.72	117.90	120.10	122.33	124.59	126.86	129.17	41
42	111.44	113.56	115.70	117.86	120.06	122.27	124.51	126.78	129.07	131.38	42
43	113.57	115.70	117.85	120.03	122.23	124.46	126.72	128.99	131.30	133.62	43
44	115.72	117.86	120.03	122.22	124.44	126.68	128.94	131.23	133.55	135.89	44
45	117.90	120.06	122.23	124.44	126.67	128.92	131.20	133.50	135.83	138.18	45
46	120.10	122.27	124.46	126.68	128.92	131.19	133.48	135.79	138.13	140.49	46
47	122.33	124.51	126.72	128.94	131.20	133.48	135.78	138.10	140.46	142.83	47
48	124.59	126.78	128.99	131.23	133.50	135.79	138.10	140.44	142.81	145.20	48
49	126.86	129.07	131.30	133.55	135.83	138.13	140.46	142.81	145.19	147.59	49
50	129.17	131.38	133.62	135.89	138.18	140.49	142.83	145.20	147.59	150.00	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XXXV.—BASE 31—SLOPES 2 to 1.

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.60	1.25	1.94	2.69	3.49	4.33	5.23	6.17	7.17	8.21	0
1	1.22	1.90	2.62	3.39	4.21	5.08	6.00	6.97	7.99	9.06	1
2	1.90	2.59	3.34	4.14	4.98	5.88	6.82	7.81	8.86	9.95	2
3	2.62	3.34	4.11	4.93	5.80	6.72	7.69	8.71	9.78	10.90	3
4	3.39	4.14	4.93	5.78	6.67	7.62	8.61	9.65	10.75	11.89	4
5	4.21	4.98	5.80	6.67	7.59	8.56	9·58	10.65	11.77	12.93	5
6	5.08	5.88	6.72	7.62	8.56	9.56	10.60	11.69	12.83	14.02	6
7	6.00	6.82	7.69	8.61	9.58	10.60	11.67	12.78	13.95	15.17	7
8	6.97	7.81	8.71	9.65	10.65	11.69	12.78	13.93	15.12	16.36	8
9	7.99	8.86	9.78	10.75	11.77	12.83	13.95	15.12	16.33	17.60	9
10	9.06	9.95	10.90	11.89	12.93	14.02	15.17	16.36	17.60	18.89	10
11	10.17	11.09	12.06	13.08	14.15	15.27	16.43	17.65	18.91	20.23	11
12	11.34	12.28	13.28	14.32	15.41	16.56	17.75	18.99	20.28	21.62	12
13	12.56	13.52	14.54	15.61	16.73	17.90	19.11	20.38	21.69	23.06	13
14	13.82	14.81	15.86	16.95	18.09	19.28	20.52	21.81	23.15	24.54	14
15	15.14	16.15	17.22	18.34	19.51	20.72	21.99	23.30	24.67	26.08	15
16	16.50	17.54	18.64	19.78	20.97	22.21	23.50	24.84	26.23	27.67	16
17	17.91	18.98	20.10	21.27	22.48	23.75	25.06	26.43	27.84	29.30	17
18	19.38	20.47	21.61	22.80	24.04	25.33	26.67	28.06	29.50	30.99	18
19	20.89	22.01	23.17	24.39	25.65	26.97	28.33	29.75	31.21	32.72	19
20	22.45	23.59	24.78	26.02	27.31	28.65	30.04	31.48	32.97	34.51	20
21	24.06	25.23	26.44	27.71	29.02	30.39	31.80	33.27	34.78	36.34	21
22	25.72	26.91	28.15	29.44	30.78	32.17	33.61	35.10	36.64	38.22	22
23	27.43	28.65	29.91	31.23	32.59	34.01	35.47	36.98	38.54	40.15	23
24	29.19	30.43	31.72	33.06	34.45	35.89	37.38	38.91	40.50	42.14	24
25	31.00	32.27	33.58	34.94	36.36	37.82	39.33	40.90	42.51	44.17	25
26	32.86	34.15	35.49	36.88	38.31	39.80	41.34	42.93	44.56	46.25	26
27	34.77	36.08	37.44	38.86	40.32	41.83	43.40	45.01	46.67	48.38	27
28	36.72	38.06	39.45	40.89	42.38	43.91	45.50	47.14	48.82	50.56	28
29	38.73	40.09	41.51	42.97	44.48	46.04	47.65	49.31	51.02	52.78	29
30	40.78	42.17	43.61	45.10	46.64	48.22	49.86	51.54	53.28	55.06	30
31	42.89	44.30	45.77	47.28	48.84	50.45	52.11	53.82	55.58	57.39	31
32	45.04	46.48	47.97	49.51	51.09	52.73	54.41	56.15	57.93	59.77	32
33	47.25	48.71	50.22	51.78	53.40	55.06	56.77	58.52	60.33	62.19	33
34	49.50	50.99	52.52	54.11	55.75	57.43	59.17	60.95	62.78	64.67	34
35	51.80	53.31	54.88	56.49	58.15	59.86	61.62	63.43	65.28	67.19	35
36	54.15	55.69	57.28	58.91	60.60	62.33	64.12	65.95	67.83	69.77	36
37	56.56	58.12	59.73	61.39	63.10	64.86	66.67	68.52	70.43	72.39	37
38	59.01	60.59	62.23	63.91	65.65	67.43	69.27	71.15	73.08	75.06	38
39	61.51	63.12	64.78	66.49	68.25	70.06	71.91	73.82	75.78	77.78	39
40	64.06	65.69	67.38	69.11	70.90	72.73	74.61	76.54	78.52	80.56	40
41	66.65	68.31	70.02	71.78	73.59	75.45	77.36	79.31	81.32	83.38	41
42	69.30	70.99	72.72	74.51	76.34	78.22	80.15	82.14	84.17	86.25	42
43	72.00	73.71	75.47	77.28	79.14	81.04	83.00	85.01	87.06	89.17	43
44	74.75	76.48	78.27	80.10	81.98	83.91	85.90	87.93	90.01	92.14	44
45	77.54	79.30	81.11	82.97	84.88	86.83	88.84	90.90	93.00	95.15	45
46	80.39	82.17	84.01	85.89	87.82	89.80	91.83	93.91	96.04	98.22	46
47	83.28	85.09	86.95	88.86	90.81	92.82	94.88	96.98	99.14	101.34	47
48	86.23	88.06	89.94	91.88	93.86	95.89	97.97	100.10	102.28	104.51	48
49	89.22	91.08	92.99	94.94	96.95	99.01	101.11	103.27	105.47	107.72	49
50	92.27	94.15	96.08	98.06	100.09	102.17	104.30	106.48	108.71	110.99	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XXXV.—BASE 31—SLOPES 2 to 1.

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	9.30	10.44	11.64	12.88	14.17	15.51	16.90	18.33	19.82	21.36	0
1	10.17	11.34	12.56	13.82	15.14	16.50	17.91	19.38	20.89	22.45	1
2	11.09	12.28	13.52	14.81	16.15	17.54	18.98	20.47	22.01	23.59	2
3	12.06	13.28	14.54	15.86	17.22	18.64	20.10	21.61	23.17	24.78	3
4	13.08	14.32	15.61	16.95	18.34	19.78	21.27	22.80	24.39	26.02	4
5	14.15	15.41	16.73	18.09	19.51	20.97	22.48	24.04	25.65	27.31	5
6	15.27	16.56	17.90	19.28	20.72	22.21	23.75	25.33	26.97	28.65	6
7	16.43	17.75	19.11	20.52	21.99	23.50	25.06	26.67	28.33	30.04	7
8	17.65	18.99	20.38	21.81	23.30	24.84	26.43	28.06	29.75	31.48	8
9	18.91	20.28	21.69	23.15	24.67	26.23	27.84	29.50	31.21	32.97	9
10	20.23	21.62	23.06	24.54	26.08	27.67	29.30	30.99	32.72	34.51	10
11	21.59	23.01	24.47	25.98	27.54	29.15	30.81	32.52	34.28	36.09	11
12	23.01	24.44	25.93	27.47	29.06	30.69	32.38	34.11	35.90	37.73	12
13	24.47	25.93	27.44	29.01	30.62	32.28	33.99	35.75	37.56	39.41	13
14	25.98	27.47	29.01	30.59	32.23	33.91	35.65	37.43	39.27	41.15	14
15	27.54	29.06	30.62	32.23	33.89	35.60	37.36	39.17	41.02	42.93	15
16	29.15	30.69	32.28	33.91	35.60	37.33	39.12	40.95	42.83	44.77	16
17	30.81	32.38	33.99	35.65	37.36	39.12	40.93	42.78	44.69	46.65	17
18	32.52	34.11	35.75	37.43	39.17	40.95	42.78	44.67	46.60	48.58	18
19	34.28	35.90	37.56	39.27	41.02	42.83	44.69	46.60	48.56	50.56	19
20	36.09	37.73	39.41	41.15	42.93	44.77	46.65	48.58	50.56	52.59	20
21	37.95	39.61	41.32	43.08	44.89	46.75	48.65	50.61	52.62	54.67	21
22	39.86	41.54	43.28	45.06	46.90	48.78	50.71	52.69	54.72	56.80	22
23	41.81	43.52	45.28	47.09	48.95	50.86	52.81	54.82	56.88	58.98	23
24	43.82	45.56	47.34	49.17	51.06	52.99	54.97	57.00	59.08	61.21	24
25	45.88	47.64	49.44	51.30	53.21	55.17	57.17	59.23	61.33	63.49	25
26	47.98	49.77	51.60	53.48	55.41	57.40	59.43	61.51	63.66	65.81	26
27	50.14	51.94	53.80	55.71	57.67	59.67	61.73	63.83	65.99	68.19	27
28	52.34	54.17	56.06	57.99	59.97	62.00	64.08	66.21	68.39	70.62	28
29	54.59	56.45	58.36	60.31	62.32	64.38	66.48	68.64	70.84	73.09	29
30	56.90	58.78	60.71	62.69	64.72	66.80	68.93	71.11	73.34	75.62	30
31	59.25	61.15	63.11	65.12	67.17	69.28	71.43	73.64	75.89	78.19	31
32	61.65	63.58	65.56	67.59	69.67	71.80	73.98	76.21	78.49	80.81	32
33	64.10	66.06	68.06	70.12	72.22	74.38	76.58	78.83	81.16	83.49	33
34	66.60	68.58	70.61	72.69	74.82	77.00	79.23	81.51	83.83	86.21	34
35	69.15	71.15	73.21	75.31	77.47	79.67	81.93	84.23	86.58	88.98	35
36	71.75	73.78	75.86	77.99	80.17	82.40	84.67	87.00	89.38	91.80	36
37	74.40	76.45	78.56	80.71	82.91	85.17	87.47	89.82	92.22	94.67	37
38	77.09	79.17	81.30	83.48	85.71	87.99	90.31	92.69	95.12	97.59	38
39	79.84	81.94	84.10	86.30	88.56	90.86	93.21	95.61	98.06	100.56	39
40	82.64	84.77	86.94	89.17	91.45	93.78	96.15	98.58	101.06	103.58	40
41	85.48	87.64	89.84	92.09	94.40	96.75	99.15	101.60	104.10	106.65	41
42	88.38	90.56	92.78	95.06	97.39	99.77	102.19	104.67	107.19	109.77	42
43	91.32	93.52	95.78	98.08	100.43	102.83	105.28	107.78	110.33	112.93	43
44	94.31	96.54	98.82	101.15	103.52	105.95	108.43	110.95	113.52	116.15	44
45	97.36	99.61	101.91	104.27	106.67	109.12	111.62	114.17	116.77	119.41	45
46	100.45	102.73	105.06	107.43	109.86	112.33	114.86	117.43	120.06	122.73	46
47	103.59	105.90	108.25	110.65	113.10	115.60	118.15	120.75	123.40	126.09	47
48	106.78	109.11	111.49	113.91	116.39	118.91	121.49	124.11	126.78	129.51	48
49	110.02	112.38	114.78	117.23	119.73	122.28	124.88	127.52	130.22	132.97	59
50	113.31	115.69	118.12	120.59	123.12	125.69	128.31	130.99	133.71	136.48	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XXXV.—BASE 31—SLOPES 2 to 1.

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	22.94	24.58	26.27	28.00	29.78	31.62	33.50	35.43	37.41	39.44	0
1	24.06	25.72	27.43	29.19	31.00	32.86	34.77	36.72	38.73	40.78	1
2	25.23	26.91	28.65	30.43	32.27	34.15	36.08	38.06	40.09	42.17	2
3	26.44	28.15	29.91	31.72	33.58	35.49	37.44	39.45	41.51	43.61	3
4	27.71	29.44	31.23	33.06	34.94	36.88	38.86	40.89	42.97	45.10	4
5	29.02	30.78	32.59	34.45	36.36	38.31	40.32	42.38	44.48	46.64	5
6	30.39	32.17	34.01	35.89	37.82	39.80	41.83	43.91	46.04	48.22	6
7	31.80	33.61	35.47	37.38	39.33	41.34	43.40	45.50	47.65	49.86	7
8	33.27	35.10	36.98	38.91	40.90	42.93	45.01	47.14	49.31	51.54	8
9	34.78	36.64	38.54	40.50	42.51	44.56	46.67	48.82	51.02	53.28	9
10	36.34	38.22	40.15	42.14	44.17	46.25	48.38	50.56	52.78	55.06	10
11	37.95	39.86	41.81	43.82	45.88	47.98	50.14	52.34	54.59	56.90	11
12	39.61	41.54	43.52	45.56	47.64	49.77	51.94	54.17	56.45	58.78	12
13	41.32	43.28	45.28	47.34	49.44	51.60	53.80	56.06	58.36	60.71	13
14	43.08	45.06	47.09	49.17	51.30	53.48	55.71	57.99	60.31	62.69	14
15	44.89	46.90	48.95	51.06	53.21	55.41	57.67	59.97	62.32	64.72	15
16	46.75	48.78	50.86	52.99	55.17	57.40	59.67	62.00	64.38	66.80	16
17	48.65	50.71	52.81	54.97	57.17	59.43	61.73	64.08	66.48	68.93	17
18	50.61	52.69	54.82	57.00	59.23	61.51	63.83	66.21	68.64	71.11	18
19	52.62	54.72	56.88	59.08	61.33	63.66	65.99	68.39	70.84	73.34	19
20	54.67	56.80	58.98	61.21	63.49	65.81	68.19	70.62	73.09	75.62	20
21	56.78	58.93	61.14	63.39	65.69	68.04	70.44	72.90	75.40	77.94	21
22	58.93	61.11	63.34	65.62	67.94	70.32	72.75	75.22	77.75	80.32	22
23	61.14	63.34	65.59	67.90	70.25	72.65	75.10	77.60	80.15	82.75	23
24	63.39	65.62	67.90	70.22	72.60	75.02	77.50	80.02	82.60	85.22	24
25	65.69	67.94	70.25	72.60	75.00	77.45	79.95	82.50	85.10	87.75	25
26	68.04	70.32	72.65	75.02	77.45	79.93	82.45	85.02	87.65	90.32	26
27	70.44	72.75	75.10	77.50	79.95	82.45	85.00	87.60	90.25	92.94	27
28	72.90	75.22	77.60	80.02	82.50	85.02	87.60	90.22	92.90	95.62	28
29	75.40	77.75	80.15	82.60	85.10	87.65	90.25	92.90	95.59	98.34	29
30	77.94	80.32	82.75	85.22	87.75	90.32	92.94	95.62	98.34	101.11	30
31	80.54	82.94	85.40	87.90	90.44	93.04	95.69	98.39	101.14	103.93	31
32	83.19	85.62	88.09	90.62	93.19	95.81	98.49	101.21	103.98	106.80	32
33	85.89	88.34	90.84	93.39	95.99	98.66	101.33	104.08	106.88	109.72	33
34	88.64	91.11	93.64	96.21	98.83	101.51	104.23	107.00	109.82	112.69	34
35	91.43	93.93	96.48	99.08	101.73	104.43	107.17	109.97	112.81	115.71	35
36	94.28	96.80	99.38	102.00	104.67	107.40	110.17	112.99	115.86	118.78	36
37	97.17	99.72	102.32	104.97	107.67	110.41	113.21	116.06	118.95	121.90	37
38	100.12	102.69	105.31	107.99	110.71	113.48	116.30	119.17	122.09	125.06	38
39	103.11	105.71	108.36	111.06	113.80	116.60	119.44	122.34	125.28	128.28	39
40	106.15	108.78	111.45	114.17	116.94	119.77	122.64	125.56	128.52	131.54	40
41	109.25	111.90	114.59	117.34	120.14	122.98	125.88	128.82	131.81	134.86	41
42	112.39	115.06	117.78	120.56	123.38	126.25	129.17	132.14	135.15	138.22	42
43	115.58	118.28	121.02	123.82	126.67	129.56	132.51	135.50	138.54	141.64	43
44	118.82	121.54	124.31	127.14	130.01	132.93	135.90	138.91	141.98	145.10	44
45	122.11	124.86	127.65	130.50	133.40	136.34	139.33	142.38	145.47	148.61	45
46	125.45	128.22	131.04	133.91	136.83	139.80	142.82	145.89	149.01	152.17	46
47	128.84	131.64	134.48	137.38	140.32	143.31	146.36	149.45	152.59	155.78	47
48	132.28	135.10	137.97	140.89	143.86	146.88	149.94	153.06	156.23	159.44	48
49	135.77	138.61	141.51	144.45	147.44	150.49	153.58	156.72	159.91	163.15	49
50	139.30	142.17	145.09	148.06	151.08	154.15	157.27	160.43	163.65	166.91	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XXXV.—BASE 31—SLOPES 2 to 1.

Feet.	31	32	32	34	35	36	37	38	39	40	Feet.
0	41.52	43.65	45.83	48.06	50.34	52.67	55.04	57.47	59.94	62.47	0
1	42.89	45.04	47.25	49.50	51.80	54.15	56.56	59.01	61.51	64.06	1
2	44.30	46.48	48.71	50.99	53.31	55.69	58.12	60.59	63.12	65.69	2
3	45.77	47.97	50.22	52.52	54.88	57.28	59.73	62.23	64.78	67.38	3
4	47.28	49.51	51.78	54.11	56.49	58.91	61.39	63.91	66.49	69.11	4
5	48.84	51.09	53.40	55.75	58.15	60.60	63.10	65.65	68.25	70.90	5
6	50.45	52.73	55.06	57.43	59.86	62.33	64.86	67.43	70.06	72.73	6
7	52.11	54.41	56.77	59.17	61.62	64.12	66.67	69.27	71.91	74.61	7
8	53.82	56.15	58.52	60.95	63.43	65.95	68.52	71.15	73.82	76.54	8
9	55.58	57.93	60.33	62.78	65.28	67.83	70.43	73.08	75.78	78.52	9
10	57.39	59.77	62.19	64.67	67.19	69.77	72.39	75.06	77.78	80.56	10
11	59.25	61.65	64.10	66.60	69.15	71.75	74.40	77.09	79.84	82.64	11
12	61.15	63.58	66.06	68.58	71.15	73.78	76.45	79.17	81.94	84.77	12
13	63.11	65.56	68.06	70.61	73.21	75.86	78.56	81.30	84.10	86.94	13
14	65.12	67.59	70.12	72.69	75.31	77.99	80.71	83.48	86.30	89.17	14
15	67.17	69.67	72.22	74.82	77.47	80.17	82.91	85.71	88.56	91.45	15
16	69.28	71.80	74.38	77.00	79.67	82.40	85.17	87.99	90.86	93.78	16
17	71.43	73.98	76.58	79.23	81.93	84.67	87.47	90.31	93.21	96.15	17
18	73.64	76.21	78.83	81.51	84.23	87.00	89.82	92.69	95.61	98.58	18
19	75.89	78.49	81.16	83.83	86.58	89.38	92.22	95.12	98.06	101.06	19
20	78.19	80.81	83.49	86.21	88.98	91.80	94.67	97.59	100.56	103.58	20
21	80.54	83.19	85.89	88.64	91.43	94.28	97.17	100.12	103.11	106.15	21
22	82.94	85.62	88.34	91.11	93.93	96.80	99.72	102.69	105.71	108.78	22
23	85.40	88.09	90.84	93.64	96.48	99.38	102.32	105.31	108.36	111.45	23
24	87.90	90.62	93.39	96.21	99.08	102.00	104.97	107.99	111.06	114.17	24
25	90.44	93.19	95.99	98.83	101.73	104.67	107.67	110.71	113.80	116.94	25
26	93.04	95.81	98.66	101.51	104.43	107.40	110.41	113.48	116.60	119.77	26
27	95.69	98.49	101.33	104.23	107.17	110.17	113.21	116.30	119.44	122.64	27
28	98.39	101.21	104.08	107.00	109.97	112.99	116.06	119.17	122.34	125.56	28
29	101.14	103.98	106.88	109.82	112.81	115.86	118.95	122.09	125.28	128.52	29
30	103.93	106.80	109.72	112.69	115.71	118.78	121.90	125.06	128.28	131.54	30
31	106.78	109.67	112.62	115.61	118.65	121.75	124.89	128.08	131.32	134.61	31
32	109.67	112.59	115.56	118.58	121.65	124.77	127.93	131.15	134.41	137.73	32
33	112.62	115.56	118.56	121.60	124.69	127.83	131.02	134.27	137.56	140.90	33
34	115.61	118.58	121.60	124.67	127.78	130.95	134.17	137.43	140.75	144.11	34
35	118.65	121.65	124.69	127.78	130.93	134.12	137.36	140.65	143.99	147.38	35
36	121.75	124.77	127.83	130.95	134.12	137.33	140.60	143.91	147.28	150.69	36
37	124.89	127.93	131.02	134.17	137.36	140.60	143.89	147.23	150.62	154.06	37
38	128.08	131.15	134.27	137.43	140.65	143.91	147.23	150.59	154.01	157.47	38
39	131.32	134.41	137.56	140.75	143.99	147.28	150.62	154.01	157.44	160.93	39
40	134.61	137.73	140.90	144.11	147.38	150.69	154.06	157.47	160.93	164.44	40
41	137.95	141.09	144.28	147.52	150.81	154.15	157.54	160.98	164.47	168.01	41
42	141.34	144.51	147.72	150.99	154.30	157.67	161.08	164.54	168.06	171.62	42
43	144.78	147.97	151.21	154.50	157.84	161.23	164.67	168.15	171.69	175.28	43
44	148.27	151.48	154.75	158.06	161.43	164.84	168.30	171.81	175.38	178.99	44
45	151.80	155.04	158.33	161.67	165.06	168.50	171.99	175.52	179.11	182.75	45
46	155.39	158.65	161.97	165.33	168.75	172.21	175.72	179.28	182.90	186.56	46
47	159.02	162.31	165.65	169.04	172.48	175.97	179.51	183.09	186.73	190.41	47
48	162.71	166.02	169.39	172.80	176.27	179.78	183.34	186.95	190.61	194.32	48
49	166.44	169.78	173.17	176.61	180.10	183.64	187.22	190.86	194.54	198.28	49
50	170.23	173.59	177.01	180.47	183.98	187.54	191.15	194.81	198.52	202.28	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XXXV.—BASE 31—SLOPES 2 to 1.

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	65.04	67.67	70.34	73.06	75.83	78.65	81.52	84.44	87.41	90.43	0
1	66.65	69.30	72.00	74.75	77.54	80.39	83.28	86.23	89.22	92.27	1
2	68.31	70.99	73.71	76.48	79.30	82.17	85.09	88.06	91.08	94.15	2
3	70.02	72.72	75.47	78.27	81.11	84.01	86.95	89.94	92.99	96.08	3
4	71.78	74.51	77.28	80.10	82.97	85.89	88.86	91.88	94.94	98.06	4
5	73.59	76.34	79.14	81.98	84.88	87.82	90.81	93.86	96.95	100.09	5
6	75.45	78.22	81.04	83.91	86.83	89.80	92.82	95.89	99.01	102.17	6
7	77.36	80.15	83.00	85.90	88.84	91.83	94.88	97.97	101.11	104.30	7
8	79.31	82.14	85.01	87.93	90.90	93.91	96.98	100.10	103.27	106.48	8
9	81.32	84.17	87.06	90.01	93.00	96.04	99.14	102.28	105.47	108.71	9
10	83.38	86.25	89.17	92.14	95.15	98.22	101.34	104.51	107.72	110.99	10
11	85.48	88.38	91.32	94.31	97.36	100.45	103.59	106.78	110.02	113.31	11
12	87.64	90.56	93.52	96.54	99.61	102.73	105.90	109.11	112.38	115.69	12
13	89.84	92.78	95.78	98.82	101.91	105.06	108.25	111.49	114.78	118.12	13
14	92.09	95.06	98.08	101.15	104.27	107.43	110.65	113.91	117.23	120.59	14
15	94.40	97.39	100.43	103.52	106.67	109.86	113.10	116.39	119.73	123.12	15
16	96.75	99.77	102.83	105.95	109.12	112.33	115.60	118.91	122.28	125.69	16
17	99.15	102.19	105.28	108.43	111.62	114.86	118.15	121.49	124.88	128.31	17
18	101.60	104.67	107.78	110.95	114.17	117.43	120.75	124.11	127.52	130.99	18
19	104.10	107.19	110.33	113.52	116.77	120.06	123.40	126.78	130.22	133.71	19
20	106.65	109.77	112.93	116.15	119.41	122.73	126.09	129.51	132.97	136.48	20
21	109.25	112.39	115.58	118.82	122.11	125.45	128.84	132.28	135.77	139.30	21
22	111.90	115.06	118.28	121.54	124.86	128.22	131.64	135.10	138.61	142.17	22
23	114.59	117.78	121.02	124.31	127.65	131.04	134.48	137.97	141.51	145.09	23
24	117.34	120.56	123.82	127.14	130.50	133.91	137.38	140.89	144.45	148.06	24
25	120.14	123.38	126.67	130.01	133.40	136.83	140.32	143.86	147.44	151.08	25
26	122.98	126.25	129.56	132.93	136.34	139.80	143.31	146.88	150.49	154.15	26
27	125.88	129.17	132.51	135.90	139.33	142.82	146.36	149.94	153.58	157.27	27
28	128.82	132.14	135.50	138.91	142.38	145.89	149.45	153.06	156.72	160.43	28
29	131.81	135.15	138.54	141.98	145.47	149.01	152.59	156.23	159.91	163.65	29
30	134.86	138.22	141.64	145.10	148.61	152.17	155.78	159.44	163.15	166.91	30
31	137.95	141.34	144.78	148.27	151.80	155.39	159.02	162.71	166.44	170.23	31
32	141.09	144.51	147.97	151.48	155.04	158.65	162.31	166.02	169.78	173.59	32
33	144.28	147.72	151.21	154.75	158.33	161.97	165.65	169.39	173.17	177.01	33
34	147.52	150.99	154.50	158.06	161.67	165.33	169.04	172.80	176.61	180.47	34
35	150.81	154.30	157.84	161.43	165.06	168.75	172.48	176.27	180.10	183.98	35
36	154.15	157.67	161.23	164.84	168.50	172.21	175.97	179.78	183.64	187.54	36
37	157.54	161.08	164.67	168.30	171.99	175.72	179.51	183.34	187.22	191.15	37
38	160.98	164.54	168.15	171.81	175.52	179.28	183.09	186.95	190.86	194.81	38
39	164.47	168.06	171.69	175.38	179.11	182.90	186.73	190.61	194.54	198.52	39
40	168.01	171.62	175.28	178.99	182.75	186.56	190.41	194.32	198.28	202.28	40
41	171.59	175.23	178.91	182.65	186.43	190.27	194.15	198.08	202.06	206.09	41
42	175.23	178.89	182.60	186.36	190.17	194.02	197.93	201.89	205.90	209.95	42
43	178.91	182.60	186.33	190.12	193.95	197.83	201.77	205.75	209.78	213.86	43
44	182.65	186.36	190.12	193.93	197.78	201.69	205.65	209.65	213.71	217.81	44
45	186.43	190.17	193.95	197.78	201.67	205.60	209.58	213.61	217.69	221.82	45
46	190.27	194.02	197.83	201.69	205.60	209.56	213.56	217.62	221.72	225.88	46
47	194.15	197.93	201.77	205.65	209.58	213.56	217.59	221.67	225.80	229.98	47
48	198.08	201.89	205.75	209.65	213.61	217.62	221.67	225.73	229.93	234.14	48
49	202.06	205.90	209.78	213.71	217.69	221.72	225.80	229.93	234.11	238.34	49
50	206.09	209.95	213.86	217.81	221.82	225.88	229.98	254.14	238.34	242.59	50
	41	42	43	44	45	46	47	48	49	50	

TABLE XXXVI.—BASE 31—SLOPES 2 to 1 *on one side, and* 3 *to* 1 *on the opposite side.*

Feet.	1	2	3	4	5	6	7	8	9	10	Feet.
0	0.60	1.27	2.00	2.79	3.64	4.56	5.53	6.57	7.67	8.83	0
1	1.24	1.94	2.70	3.52	4.40	5.35	6.35	7.42	8.55	9.74	1
2	1.94	2.67	3.46	4.31	5.22	6.20	7.23	8.33	9.49	10.72	2
3	2.70	3.46	4.28	5.16	6.10	7.11	8.18	9.31	10.50	11.75	3
4	3.52	4.31	5.16	6.07	7.05	8.09	9.19	10.35	11.57	12.85	4
5	4.40	5.22	6.10	7.05	8.06	9.12	10.25	11.44	12.70	14.01	5
6	5.35	6.20	7.11	8.09	9.12	10.22	11.38	12.60	13.89	15.23	6
7	6.35	7.23	8.18	9.19	10.25	11.38	12.57	13.83	15.14	16.52	7
8	7.42	8.33	9.31	10.35	11.44	12.60	13.83	15.11	16.46	17.86	8
9	8.55	9.49	10.50	11.57	12.70	13.89	15.14	16.46	17.83	19.27	9
10	9.74	10.72	11.75	12.85	14.01	15.23	16.52	17.86	19.27	20.74	10
11	10.99	12.00	13.07	14.20	15.39	16.64	17.96	19.33	20.77	22.27	11
12	12.31	13.35	14.44	15.60	16.83	18.11	19.46	20.86	22.33	23.86	12
13	13.69	14.75	15.88	17.07	18.33	19.64	21.02	22.46	23.96	25.52	13
14	15.12	16.22	17.38	18.60	19.89	21.23	22.64	24.11	25.64	27.23	14
15	16.62	17.75	18.94	20.20	21.51	22.89	24.33	25.83	27.39	29.01	15
16	18.19	19.35	20.57	21.85	23.20	24.60	26.07	27.60	29.20	30.85	16
17	19.81	21.00	22.25	23.57	24.94	26.38	27.88	29.44	31.07	32.75	17
18	21.49	22.72	24.00	25.35	26.75	28.22	29.75	31.35	33.00	34.72	18
19	23.24	24.49	25.81	27.19	28.62	30.12	31.69	33.31	34.99	36.74	19
20	25.05	26.33	27.68	29.09	30.56	32.09	33.68	35.33	37.05	38.83	20
21	26.92	28.23	29.61	31.05	32.55	34.11	35.73	37.42	39.17	40.98	21
22	28.85	30.20	31.60	33.07	34.60	36.20	37.85	39.57	41.35	43.19	22
23	30.85	32.22	33.66	35.16	36.72	38.35	40.03	41.78	43.59	45.46	23
24	32.90	34.31	35.78	37.31	38.90	40.56	42.27	44.05	45.89	47.79	24
25	35.02	36.46	37.96	39.52	41.14	42.83	44.57	46.38	48.25	50.19	25
26	37.20	38.67	40.20	41.79	43.44	45.16	46.94	48.78	50.68	52.64	26
27	39.44	40.94	42.50	44.12	45.81	47.56	49.36	51.23	53.17	55.16	27
28	41.74	43.27	44.86	46.52	48.23	50.01	51.85	53.75	55.72	57.74	28
29	44.10	45.67	47.29	48.98	50.72	52.53	54.40	56.33	58.33	60.38	29
30	46.53	48.12	49.78	51.49	53.27	55.11	57.01	58.98	61.00	63.09	30
31	49.02	50.64	52.33	54.07	55.88	57.75	59.69	61.68	63.73	65.85	31
32	51.57	53.22	54.94	56.72	58.56	60.46	62.42	64.44	66.53	68.68	32
33	54.18	55.86	57.61	59.42	61.29	63.22	65.22	67.27	69.39	71.57	33
34	56.85	58.57	60.35	62.19	64.09	66.05	68.07	70.16	72.31	74.52	34
35	59.59	61.33	63.14	65.01	66.94	68.94	70.99	73.11	75.29	77.53	35
36	62.38	64.16	66.00	67.90	69.86	71.89	73.98	76.12	78.33	80.60	36
37	65.24	67.05	68.92	70.85	72.85	74.90	77.02	79.20	81.44	83.74	37
38	68.16	70.00	71.90	73.86	75.89	77.98	80.12	82.33	84.60	86.94	38
39	71.14	73.01	74.94	76.94	78.99	81.11	83.29	85.53	87.83	90.20	39
40	74.19	76.09	78.05	80.07	82.16	84.31	86.52	88.79	91.12	93.52	40
41	77.29	79.22	81.22	83.27	85.39	87.57	89.81	92.11	94.48	96.90	41
42	80.46	82.42	84.44	86.53	88.68	90.89	93.16	95.49	97.89	100.35	42
43	83.69	85.68	87.73	89.85	92.03	94.27	96.57	98.94	101.36	103.85	43
44	86.98	89.00	91.09	93.23	95.44	97.72	100.05	102.44	104.90	107.42	44
45	90.33	92.38	94.50	96.68	98.92	101.22	103.59	106.01	108.50	111.05	45
46	93.74	95.83	97.98	100.19	102.46	104.79	107.19	109.64	112.16	114.74	46
47	97.22	99.33	101.51	103.75	106.06	108.42	110.85	113.33	115.88	118.49	47
48	100.75	102.90	105.11	107.38	109.72	112.11	114.57	117.09	119.67	122.31	48
49	104.35	106.53	108.77	111.07	113.44	115.86	118.35	120.90	123.51	126.19	49
50	108.01	110.22	112.49	114.83	117.22	119.68	122.20	124.78	127.42	130.12	50
	1	2	3	4	5	6	7	8	9	10	

TABLE XXXVI.—BASE 31—SLOPES 2 to 1 *on one side, and* 3 *to* 1 *on the opposite side.*

Feet.	11	12	13	14	15	16	17	18	19	20	Feet.
0	10.05	11.33	12.68	14.09	15.56	17.09	18.68	20.33	22.05	23.83	0
1	10.99	12.31	13.69	15.12	16.62	18.19	19.81	21.49	23.24	25.05	1
2	12.00	13.35	14.75	16.22	17.75	19.35	21.00	22.72	24.49	26.33	2
3	13.07	14.44	15.88	17.38	18.94	20.57	22.25	24.00	25.81	27.68	3
4	14.20	15.60	17.07	18.60	20.20	21.85	23.57	25.35	27.19	29.09	4
5	15.39	16.83	18.33	19.89	21.51	23.20	24.94	26.75	28.62	30.56	5
6	16.64	18.11	19.64	21.23	22.89	24.60	26.38	28.22	30.12	32.09	6
7	17.96	19.46	21.02	22.64	24.33	26.07	27.88	29.75	31.69	33.68	7
8	19.33	20.86	22.46	24.11	25.83	27.60	29.44	31.35	33.31	35.33	8
9	20.77	22.33	23.96	25.64	27.39	29.20	31.07	33.00	34.99	37.05	9
10	22.27	23.86	25.52	27.23	29.01	30.85	32.75	34.72	36.74	38.83	10
11	23.83	25.46	27.14	28.89	30.70	32.57	34.50	36.49	38.55	40.67	11
12	25.46	27.11	28.83	30.60	32.44	34.35	36.31	38.33	40.42	42.57	12
13	27.14	28.83	30.57	32.38	34.25	36.19	38.18	40.23	42.35	44.53	13
14	28.89	30.60	32.38	34.22	36.12	38.09	40.11	42.20	44.35	46.56	14
15	30.70	32.44	34.25	36.12	38.06	40.05	42.10	44.22	46.40	48.64	15
16	32.57	34.35	36.19	38.09	40.05	42.07	44.16	46.31	48.52	50.79	16
17	34.50	36.31	38.18	40.11	42.10	44.16	46.28	48.46	50.70	53.00	17
18	36.49	38.33	40.23	42.20	44.22	46.31	48.46	50.67	52.94	55.27	18
19	38.55	40.42	42.35	44.35	46.40	48.52	50.70	52.94	55.24	57.60	19
20	40.67	42.57	44.53	46.56	48.64	50.79	53.00	55.27	57.60	60.00	20
21	42.85	44.78	46.77	48.83	50.94	53.12	55.36	57.67	60.03	62.46	21
22	45.09	47.05	49.07	51.16	53.31	55.52	57.79	60.12	62.52	64.98	22
23	47.39	49.38	51.44	53.56	55.73	57.98	60.28	62.64	65.07	67.56	23
24	49.75	51.78	53.86	56.01	58.22	60.49	62.83	65.22	67.68	70.20	24
25	52.18	54.23	56.35	58.53	60.77	63.07	65.44	67.86	70.35	72.90	25
26	54.67	56.75	58.90	61.11	63.38	65.72	68.11	70.57	73.09	75.67	26
27	57.22	59.33	61.51	63.75	66.06	68.42	70.85	73.33	75.88	78.49	27
28	59.83	61.98	64.19	66.46	68.79	71.19	73.64	76.16	78.74	81.38	28
29	62.50	64.68	66.92	69.22	71.59	74.01	76.50	79.05	81.66	84.33	29
30	65.23	67.44	69.72	72.05	74.44	76.90	79.42	82.00	84.64	87.35	30
31	68.03	70.27	72.57	74.94	77.36	79.85	82.40	85.01	87.69	90.42	31
32	70.89	73.16	75.49	77.89	80.35	82.86	85.44	88.09	90.79	93.56	32
33	73.81	76.11	78.48	80.90	83.39	85.94	88.55	91.22	93.96	96.75	33
34	76.79	79.12	81.52	83.98	86.49	89.07	91.72	94.42	97.19	100.01	34
35	79.83	82.20	84.62	87.11	89.66	92.27	94.94	97.68	100.48	103.33	35
36	82.94	85.33	87.79	90.31	92.89	95.53	98.23	101.00	103.83	106.72	36
37	86.10	88.53	91.02	93.57	96.18	98.85	101.59	104.38	107.24	110.16	37
38	89.33	91.79	94.31	96.89	99.53	102.23	105.00	107.83	110.72	113.67	38
39	92.62	95.11	97.66	100.27	102.94	105.68	108.48	111.33	114.25	117.23	39
40	95.98	98.49	101.07	103.72	106.42	109.19	112.01	114.90	117.85	120.86	40
41	99.39	101.94	104.55	107.22	109.96	112.75	115.61	118.53	121.51	124.56	41
42	102.86	105.44	108.09	110.79	113.56	116.38	119.27	122.22	125.23	128.31	42
43	106.40	109.01	111.69	114.42	117.22	120.07	122.99	125.98	129.02	132.12	43
44	110.00	112.64	115.35	118.11	120.94	123.83	126.78	129.79	132.86	136.00	44
45	113.66	116.33	119.07	121.86	124.72	127.64	130.62	133.67	136.77	139.94	45
46	117.38	120.09	122.85	125.68	128.57	131.52	134.53	137.60	140.74	143.94	46
47	121.17	123.90	126.70	129.56	132.48	135.46	138.50	141.60	144.77	148.00	47
48	125.01	127.78	130.60	133.49	136.44	139.46	142.53	145.67	148.86	152.12	48
49	128.92	131.72	134.57	137.49	140.48	143.52	146.62	149.79	153.02	156.31	59
50	132.89	135.72	138.60	141.56	144.57	147.64	150.78	153.98	157.23	160.56	50
	11	12	13	14	15	16	17	18	19	20	

TABLE XXXVI.—BASE 31—SLOPES 2 to 1 *on one side, and* 3 *to* 1 *on the opposite side.*

Feet.	21	22	23	24	25	26	27	28	29	30	Feet.
0	25.67	27.57	29.53	31.56	33.64	35.79	38.00	40.27	42.60	45.00	0
1	26.92	28.85	30.85	32.90	35.02	37.20	39.44	41.74	44.10	46.53	1
2	28.23	30.20	32.22	34.31	36.46	38.67	40.94	43.27	45.67	48.12	2
3	29.61	31.60	33.66	35.78	37.96	40.20	42.50	44.86	47.29	49.78	3
4	31.05	33.07	35.16	37.31	39.52	41.79	44.12	46.52	48.98	51.49	4
5	32.55	34.60	36.72	38.90	41.14	43.44	45.81	48.23	50.72	53.27	5
6	34.11	36.20	38.35	40.56	42.83	45.16	47.56	50.01	52.53	55.11	6
7	35.73	37.85	40.03	42.27	44.57	46.94	49.36	51.85	54.40	57.01	7
8	37.42	39.57	41.78	44.05	46.38	48.78	51.23	53.75	56.33	58.98	8
9	39.17	41.35	43.59	45.89	48.25	50.68	53.17	55.72	58.33	61.00	9
10	40.98	43.19	45.46	47.79	50.19	52.64	55.16	57.74	60.38	63.09	10
11	42.85	45.09	47.39	49.75	52.18	54.67	57.22	59.83	62.50	65.23	11
12	44.78	47.05	49.38	51.78	54.23	56.75	59.33	61.98	64.68	67.44	12
13	46.77	49.07	51.44	53.86	56.35	58.90	61.51	64.19	66.92	69.72	13
14	48.83	51.16	53.56	56.01	58.53	61.11	63.75	66.46	69.22	72.05	14
15	50.94	53.31	55.73	58.22	60.77	63.38	66.06	68.79	71.59	74.44	15
16	53.12	55.52	57.98	60.49	63.07	65.72	68.42	71.19	74.01	76.90	16
17	55.36	57.79	60.28	62.83	65.44	68.11	70.85	73.64	76.50	79.42	17
18	57.67	60.12	62.64	65.22	67.86	70.57	73.33	76.16	79.05	82.00	18
19	60.03	62.52	65.07	67.68	70.35	73.09	75.88	78.74	81.66	84.64	19
20	62.46	64.98	67.56	70.20	72.90	75.67	78.49	81.38	84.33	87.35	20
21	64.94	67.49	70.10	72.78	75.51	78.31	81.17	84.09	87.07	90.11	21
22	67.49	70.07	72.72	75.42	78.19	81.01	83.90	86.85	89.86	92.94	22
23	70.10	72.72	75.39	78.12	80.92	83.78	86.70	89.68	92.72	95.83	23
24	72.78	75.42	78.12	80.89	83.72	86.60	89.56	92.57	95.64	98.78	24
25	75.51	78.19	80.92	83.72	86.57	89.49	92.48	95.52	98.62	101.79	25
26	78.31	81.01	83.78	86.60	89.49	92.44	95.46	98.53	101.67	104.86	26
27	81.17	83.90	86.70	89.56	92.48	95.46	98.50	101.60	104.77	108.00	27
28	84.09	86.85	89.68	92.57	95.52	98.53	101.60	104.74	107.94	111.20	28
29	87.07	89.86	92.72	95.64	98.62	101.67	104.77	107.94	111.17	114.46	29
30	90.11	92.94	95.83	98.78	101.79	104.86	108.00	111.20	114.46	117.78	30
31	93.22	96.07	98.99	101.98	105.02	108.12	111.29	114.52	117.81	121.16	31
32	96.38	99.27	102.22	105.23	108.31	111.44	114.64	117.90	121.22	124.60	32
33	99.61	102.53	105.51	108.56	111.66	114.83	118.06	121.35	124.70	128.11	33
34	102.90	105.85	108.86	111.94	115.07	118.27	121.53	124.85	128.23	131.68	34
35	106.25	109.23	112.28	115.38	118.55	121.78	125.07	128.42	131.83	135.31	35
36	109.67	112.68	115.75	118.89	122.09	125.35	128.67	132.05	135.49	139.00	36
37	113.14	116.19	119.29	122.46	125.69	128.98	132.33	135.74	139.22	142.75	37
38	116.68	119.75	122.89	126.09	129.35	132.67	136.05	139.49	143.00	146.57	38
39	120.28	123.38	126.55	129.78	133.07	136.42	139.83	143.31	146.85	150.44	39
40	123.94	127.07	130.27	133.53	136.85	140.23	143.68	147.19	150.75	154.38	40
41	127.66	130.83	134.06	137.35	140.70	144.11	147.59	151.12	154.72	158.38	41
42	131.44	134.64	137.90	141.22	144.60	148.05	151.56	155.12	158.75	162.44	42
43	135.29	138.52	141.81	145.16	148.57	152.05	155.59	159.19	162.85	166.57	43
44	139.20	142.46	145.78	149.16	152.60	156.11	159.68	163.31	167.00	170.75	44
45	143.17	146.46	149.81	153.22	156.70	160.23	163.83	167.49	171.22	175.00	45
46	147.20	150.52	153.90	157.35	160.85	164.42	168.05	171.74	175.49	179.31	46
47	151.29	154.64	158.06	161.53	165.07	168.67	172.33	176.05	179.83	183.68	47
48	155.44	158.83	162.27	165.78	169.35	172.98	176.67	180.42	184.23	188.11	48
49	159.66	163.07	166.55	170.09	173.69	177.35	181.07	184.85	188.70	192.60	49
50	163.94	167.38	170.89	174.46	178.09	181.78	185.53	189.35	193.22	197.16	50
	21	22	23	24	25	26	27	28	29	30	

TABLE XXXVI.—BASE 31—SLOPES 2 to 1 *on one side, and* 3 *to* 1 *on the opposite side.*

Feet.	31	32	33	34	35	36	37	38	39	40	Feet.
0	47.46	49.98	52.56	55.20	57.90	60.67	63.49	66.38	69.33	72.35	0
1	49.02	51.57	54.18	56.85	59.59	62.38	65.24	68.16	71.14	74.19	1
2	50.64	53.22	55.86	58.57	61.33	64.16	67.05	70.00	73.01	76.09	2
3	52.33	54.94	57.61	60.35	63.14	66.00	68.92	71.90	74.94	78.05	3
4	54.07	56.72	59.42	62.19	65.01	67.90	70.85	73.86	76.94	80.07	4
5	55.88	58.56	61.29	64.09	66.94	69.86	72.85	75.89	78.99	82.16	5
6	57.75	60.46	63.22	66.05	68.94	71.89	74.90	77.98	81.11	84.31	6
7	59.69	62.42	65.22	68.07	70.99	73.98	77.02	80.12	83.29	86.52	7
8	61.68	64.44	67.27	70.16	73.11	76.12	79.20	82.33	85.53	88.79	8
9	63.73	66.53	69.39	72.31	75.29	78.33	81.44	84.60	87.83	91.12	9
10	65.85	68.68	71.57	74.52	77.53	80.60	83.74	86.94	90.20	93.52	10
11	68.03	70.89	73.81	76.79	79.83	82.94	86.10	89.33	92.62	95.98	11
12	70.27	73.16	76.11	79.12	82.20	85.33	88.53	91.79	95.11	98.49	12
13	72.57	75.49	78.48	81.52	84.62	87.79	91.02	94.31	97.66	101.07	13
14	74.94	77.89	80.90	83.98	87.11	90.31	93.57	96.89	100.27	103.72	14
15	77.36	80.35	83.39	86.49	89.66	92.89	96.18	99.53	102.94	106.42	15
16	79.85	82.86	85.94	89.07	92.27	95.53	98.85	102.23	105.68	109.19	16
17	82.40	85.44	88.55	91.72	94.94	98.23	101.59	105.00	108.48	112.01	17
18	85.01	88.09	91.22	94.42	97.68	101.00	104.38	107.83	111.33	114.90	18
19	87.69	90.79	93.96	97.19	100.48	103.83	107.24	110.72	114.25	117.85	19
20	90.42	93.56	96.75	100.01	103.33	106.72	110.16	113.67	117.23	120.86	20
21	93.22	96.38	99.61	102.90	106.25	109.67	113.14	116.68	120.28	123.94	21
22	96.07	99.27	102.53	105.85	109.23	112.68	116.19	119.75	123.38	127.07	22
23	98.99	102.22	105.51	108.86	112.28	115.75	119.29	122.89	126.55	130.27	23
24	101.98	105.23	108.56	111.94	115.38	118.89	122.46	126.09	129.78	133.53	24
25	105.02	108.31	111.66	115.07	118.55	122.09	125.69	129.35	133.07	136.85	25
26	108.12	111.44	114.83	118.27	121.78	125.35	128.98	132.67	136.42	140.23	26
27	111.29	114.64	118.06	121.53	125.07	128.67	132.33	136.05	139.83	143.68	27
28	114.52	117.90	121.35	124.85	128.42	132.05	135.74	139.49	143.31	147.19	28
29	117.81	121.22	124.70	128.23	131.83	135.49	139.22	143.00	146.85	150.75	29
30	121.16	124.60	128.11	131.68	135.31	139.00	142.75	146.57	150.44	154.38	30
31	124.57	128.05	131.59	135.19	138.85	142.57	146.35	150.20	154.10	158.07	31
32	128.05	131.56	135.12	138.75	142.44	146.20	150.01	153.89	157.83	161.83	32
33	131.59	135.12	138.72	142.38	146.10	149.89	153.73	157.64	161.61	165.64	33
34	135.19	138.75	142.38	146.07	149.83	153.64	157.52	161.46	165.46	169.52	34
35	138.85	142.44	146.10	149.83	153.61	157.46	161.36	165.33	169.36	173.46	35
36	142.57	146.20	149.89	153.64	157.46	161.33	165.27	169.27	173.33	177.46	36
37	146.35	150.01	153.73	157.52	161.36	165.27	169.24	173.27	177.36	181.52	37
38	150.20	153.89	157.64	161.46	165.33	169.27	173.27	177.33	181.46	185.64	38
39	154.10	157.83	161.61	165.46	169.36	173.33	177.36	181.46	185.61	189.83	39
40	158.07	161.83	165.64	169.52	173.46	177.46	181.52	185.64	189.83	194.07	40
41	162.10	165.89	169.73	173.64	177.61	181.64	185.73	189.89	194.10	198.38	41
42	166.20	170.01	173.89	177.83	181.83	185.89	190.01	194.20	198.44	202.75	42
43	170.35	174.20	178.10	182.07	186.10	190.20	194.35	198.57	202.85	207.19	43
44	174.57	178.44	182.38	186.38	190.44	194.57	198.75	203.00	207.31	211.68	44
45	178.85	182.75	186.72	190.75	194.85	199.00	203.22	207.49	211.83	216.23	45
46	183.19	187.12	191.12	195.19	199.31	203.49	207.74	212.05	216.42	220.85	46
47	187.59	191.56	195.59	199.68	203.83	208.05	212.33	216.67	221.07	225.53	47
48	192.05	196.05	200.11	204.23	208.42	212.67	216.98	221.35	225.78	230.27	48
49	196.57	200.60	204.70	208.85	213.07	217.35	221.69	226.09	230.55	235.07	49
50	201.16	205.22	209.35	213.53	217.78	222.09	226.46	230.89	235.38	239.94	50
	31	32	33	34	35	36	37	38	39	40	

TABLE XXXVI.—BASE 31—SLOPES 2 to 1 *on one side, and* 3 *to* 1 *on the opposite side.*

Feet.	41	42	43	44	45	46	47	48	49	50	Feet.
0	75.42	78.56	81.75	85.01	88.33	91.72	95.16	98.67	102.23	105.86	0
1	77.29	80.46	83.69	86.98	90.33	93.74	97.22	100.75	104.35	108.01	1
2	79.22	82.42	85.68	89.00	92.38	95.83	99.33	102.90	106.53	110.22	2
3	81.22	84.44	87.73	91.09	94.50	97.98	101.51	105.11	108.77	112.49	3
4	83.27	86.53	89.85	93.23	96.68	100.19	103.75	107.38	111.07	114.83	4
5	85.39	88.68	92.03	95.44	98.92	102.46	106.06	109.72	113.44	117.22	5
6	87.57	90.89	94.27	97.72	101.22	104.79	108.42	112.11	115.86	119.68	6
7	89.81	93.16	96.57	100.05	103.59	107.19	110.85	114.57	118.35	122.20	7
8	92.11	95.49	98.94	102.44	106.01	109.64	113.33	117.09	120.90	124.78	8
9	94.48	97.89	101.36	104.90	108.50	112.16	115.88	119.67	123.51	127.42	9
10	96.90	100.35	103.85	107.42	111.05	114.74	118.49	122.31	126.19	130.12	10
11	99.39	102.86	106.40	110.00	113.66	117.38	121.17	125.01	128.92	132.89	11
12	101.94	105.44	109.01	112.64	116.33	120.09	123.90	127.78	131.72	135.72	12
13	104.55	108.09	111.69	115.35	119.07	122.85	126.70	130.60	134.57	138.60	13
14	107.22	110.79	114.42	118.11	121.86	125.68	129.56	133.49	137.49	141.56	14
15	109.96	113.56	117.22	120.94	124.72	128.57	132.48	136.44	140.48	144.57	15
16	112.75	116.38	120.07	123.83	127.64	131.52	135.46	139.46	143.52	147.64	16
17	115.61	119.27	122.99	126.78	130.62	134.53	138.50	142.53	146.62	150.78	17
18	118.53	122.22	125.98	129.79	133.67	137.60	141.60	145.67	149.79	153.98	18
19	121.51	125.23	129.02	132.86	136.77	140.74	144.77	148.86	153.02	157.23	19
20	124.56	128.31	132.12	136.00	139.94	143.94	148.00	152.12	156.31	160.56	20
21	127.66	131.44	135.29	139.20	143.17	147.20	151.29	155.44	159.66	163.94	21
22	130.83	134.64	138.52	142.46	146.46	150.52	154.64	158.83	163.07	167.38	22
23	134.06	137.90	141.81	145.78	149.81	153.90	158.06	162.27	166.55	170.89	23
24	137.35	141.22	145.16	149.16	153.22	157.35	161.53	165.78	170.09	174.46	24
25	140.70	144.60	148.57	152.60	156.70	160.85	165.07	169.35	173.69	178.09	25
26	144.11	148.05	152.05	156.11	160.23	164.42	168.67	172.98	177.35	181.78	26
27	147.59	151.56	155.59	159.68	163.83	168.05	172.33	176.67	181.07	185.53	27
28	151.12	155.12	159.19	163.31	167.49	171.74	176.05	180.42	184.85	189.35	28
29	154.72	158.75	162.85	167.00	171.22	175.49	179.83	184.23	188.70	193.22	29
30	158.38	162.44	166.57	170.75	175.00	179.31	183.68	188.11	192.60	197.16	30
31	162.10	166.20	170.35	174.57	178.85	183.19	187.59	192.05	196.57	201.16	31
32	165.89	170.01	174.20	178.44	182.75	187.12	191.56	196.05	200.60	205.22	32
33	169.73	173.89	178.10	182.38	186.72	191.12	195.59	200.11	204.70	209.35	33
34	173.64	177.83	182.07	186.38	190.75	195.19	199.68	204.23	208.85	213.53	34
35	177.61	181.83	186.10	190.44	194.85	199.31	203.83	208.42	213.07	217.78	35
36	181.64	185.89	190.20	194.57	199.00	203.49	208.05	212.67	217.35	222.09	36
37	185.73	190.01	194.35	198.75	203.22	207.74	212.33	216.98	221.69	226.46	37
38	189.89	194.20	198.57	203.00	207.49	212.05	216.67	221.35	226.09	230.89	38
39	194.10	198.44	202.85	207.31	211.83	216.42	221.07	225.78	230.55	235.38	39
40	198.38	202.75	207.19	211.68	216.23	220.85	225.53	230.27	235.07	239.94	40
41	202.72	207.12	211.59	216.11	220.70	225.35	230.06	234.83	239.66	244.56	41
42	207.12	211.56	216.05	220.60	225.22	229.90	234.64	239.44	244.31	249.23	42
43	211.59	216.05	220.57	225.16	229.81	234.52	239.29	244.12	249.02	253.98	43
44	216.11	220.60	225.16	229.78	234.46	239.20	244.00	248.86	253.79	258.78	44
45	220.70	225.22	229.81	234.46	239.17	243.94	248.77	253.67	258.62	263.64	45
46	225.35	229.90	234.52	239.20	243.94	248.74	253.60	258.53	263.52	268.57	46
47	230.06	234.64	239.29	244.00	248.77	253.60	258.50	263.46	268.48	273.56	47
48	234.83	239.44	244.12	248.86	253.67	258.53	263.46	268.44	273.49	278.60	48
49	239.66	244.31	249.02	253.79	258.62	263.52	268.48	273.49	278.57	283.72	49
50	244.56	249.23	253.98	258.78	263.64	268.57	273.56	278.60	283.72	288.89	50
	41	42	43	44	45	46	47	48	49	50	

APPENDIX.

DIFFERENT RULES AND METHODS

IN COMMON USE

FOR

CALCULATING THE EARTH-WORK IN CANALS,

AND FOR

LAYING OUT THE LINES ON THE GROUND.

TABLE *for ascertaining the superficial quantity of land.*

1		51		101		151	
1	.0000230	51	.0011708	101	.0023186	151	.0034665
2	.0000459	2	.0011938	2	.0023416	2	.0034894
3	.0000689	3	.0012167	3	.0023646	3	.0035124
4	.0000918	4	.0012397	4	.0023875	4	.0035353
5	.0001148	5	.0012626	5	.0024105	5	.0035583
6	.0001377	6	.0012856	6	.0024334	6	.0035813
7	.0001607	7	.0013085	7	.0024564	7	.0036042
8	.0001837	8	.0013315	8	.0024793	8	.0036272
9	.0002066	9	.0013545	9	.0025023	9	.0036501
10	.0002296	60	.0013774	110	.0025252	160	.0036731
1	.0002525	1	.0014004	1	.0025482	1	.0036960
2	.0002755	2	.0014233	2	.0025712	2	.0037190
3	.0002984	3	.0014463	3	.0025941	3	.0037420
4	.0003214	4	.0014692	4	.0026171	4	.0037649
5	.0003444	5	.0014922	5	.0026400	5	.0037879
6	.0003673	6	.0015151	6	.0026630	6	.0038108
7	.0003903	7	.0015381	7	.0026859	7	.0038338
8	.0004132	8	.0015611	8	.0027089	8	.0038567
9	.0004362	9	.0015840	9	.0027319	9	.0038797
20	.0004591	70	.0016070	120	.0027548	170	.0039027
1	.0004821	1	.0016299	1	.0027778	1	.0039256
2	.0005050	2	.0016529	2	.0028007	2	.0039486
3	.0005280	3	.0016758	3	.0028237	3	.0039715
4	.0005510	4	.0016988	4	.0028466	4	.0039945
5	.0005739	5	.0017218	5	.0028696	5	.0040174
6	.0005969	6	.0017447	6	.0028926	6	.0040404
7	.0006198	7	.0017677	7	.0029155	7	.0040634
8	.0006428	8	.0017906	8	.0029385	8	.0040863
9	.0006657	9	.0018136	9	.0029614	9	.0041093
30	.0006887	80	.0018365	130	.0029844	180	.0041322
1	.0007117	1	.0018595	1	.0030073	1	.0041552
2	.0007346	2	.0018825	2	.0030303	2	.0041781
3	.0007576	3	.0019054	3	.0030533	3	.0042011
4	.0007805	4	.0019284	4	.0030762	4	.0042241
5	.0008035	5	.0019513	5	.0030992	5	.0042470
6	.0008264	6	.0019743	6	.0031221	6	.0042700
7	.0008494	7	.0019972	7	.0031451	7	.0042929
8	.0008724	8	.0020202	8	.0031680	8	.0043159
9	.0008953	9	.0020432	9	.0031910	9	.0043388
40	.0009183	90	.0020661	140	.0032140	190	.0043618
1	.0009412	1	.0020891	1	.0032369	1	.0043847
2	.0009642	2	.0021120	2	.0032599	2	.0044077
3	.0009871	3	.0021350	3	.0032828	3	.0044307
4	.0010101	4	.0021579	4	.0033058	4	.0044536
5	.0010331	5	.0021809	5	.0033287	5	.0044766
6	.0010560	6	.0022039	6	.0033517	6	.0044995
7	.0010790	7	.0022268	7	.0033746	7	.0045225
8	.0011019	8	.0022498	8	.0033976	8	.0045454
9	.0011249	9	.0022727	9	.0034206	9	.0045684
50	.0011478	100	.0022957	150	.0034435	200	.0045914
50		100		150		200	

TABLE *for ascertaining the superficial quantity of land.*

201		251		301		351	
201	.0046143	251	.0057622	301	.0069100	351	.0080578
2	.0046373	2	.0057851	2	.0069330	2	.0080808
3	.0046602	3	.0058081	3	.0069559	3	.0081038
4	.0046832	4	.0058310	4	.0069789	4	.0081267
5	.0047061	5	.0058540	5	.0070018	5	.0081497
6	.0047291	6	.0058769	6	.0070248	6	.0081726
7	.0047521	7	.0058999	7	.0070477	7	.0081956
8	.0047750	8	.0059229	8	.0070707	8	.0082185
9	.0047980	9	.0059458	9	.0070937	9	.0082415
210	.0048209	260	.0059688	310	.0071166	360	.0082644
1	.0048439	1	.0059917	1	.0071396	1	.0082874
2	.0048668	2	.0060147	2	.0071625	2	.0083104
3	.0048898	3	.0060376	3	.0071855	3	.0083333
4	.0049128	4	.0060606	4	.0072084	4	.0083563
5	.0049357	5	.0060836	5	.0072314	5	.0083792
6	.0049587	6	.0061065	6	.0072543	6	.0084022
7	.0049816	7	.0061295	7	.0072773	7	.0084251
8	.0050046	8	.0061524	8	.0073003	8	.0084481
9	.0050275	9	.0061754	9	.0073232	9	.0084711
220	.0050505	270	.0061983	320	.0073462	370	.0084940
1	.0050735	1	.0062213	1	.0073691	1	.0085170
2	.0050964	2	.0062442	2	.0073921	2	.0085399
3	.0051194	3	.0062672	3	.0074150	3	.0085629
4	.0051423	4	.0062902	4	.0074379	4	.0085858
5	.0051653	5	.0063131	5	.0074610	5	.0086088
6	.0051882	6	.0063361	6	.0074839	6	.0086318
7	.0052112	7	.0063590	7	.0075069	7	.0086547
8	.0052342	8	.0063820	8	.0075298	8	.0086777
9	.0052571	9	.0064049	9	.0075528	9	.0087006
230	.0052801	280	.0064279	330	.0075757	380	.0087236
1	.0053030	1	.0064509	1	.0075987	1	.0087465
2	.0053260	2	.0064738	2	.0076217	2	.0087695
3	.0053489	3	.0064968	3	.0076446	3	.0087925
4	.0053719	4	.0065197	4	.0076676	4	.0088154
5	.0053948	5	.0065427	5	.0076905	5	.0088384
6	.0054178	6	.0065656	6	.0077135	6	.0088613
7	.0054408	7	.0065896	7	.0077364	7	.0088843
8	.0054637	8	.0066126	8	.0077594	8	.0089072
9	.0054867	9	.0066355	9	.0077824	9	.0089302
240	.0055096	290	.0066575	340	.0078053	390	.0089532
1	.0055326	1	.0066804	1	.0078283	1	.0089761
2	.0055555	2	.0067034	2	.0078512	2	.0089991
3	.0055785	3	.0067263	3	.0078742	3	.0090220
4	.0056015	4	.0067493	4	.0078971	4	.0090450
5	.0056244	5	.0067723	5	.0079201	5	.0090679
6	.0056474	6	.0067952	6	.0079431	6	.0090909
7	.0056703	7	.0068182	7	.0079660	7	.0091138
8	.0056933	8	.0068411	8	.0079890	8	.0091568
9	.0057162	9	.0068641	9	.0080119	9	.0091598
250	.0057392	300	.0068870	350	.0080349	400	.0091827
250		300		350		400	

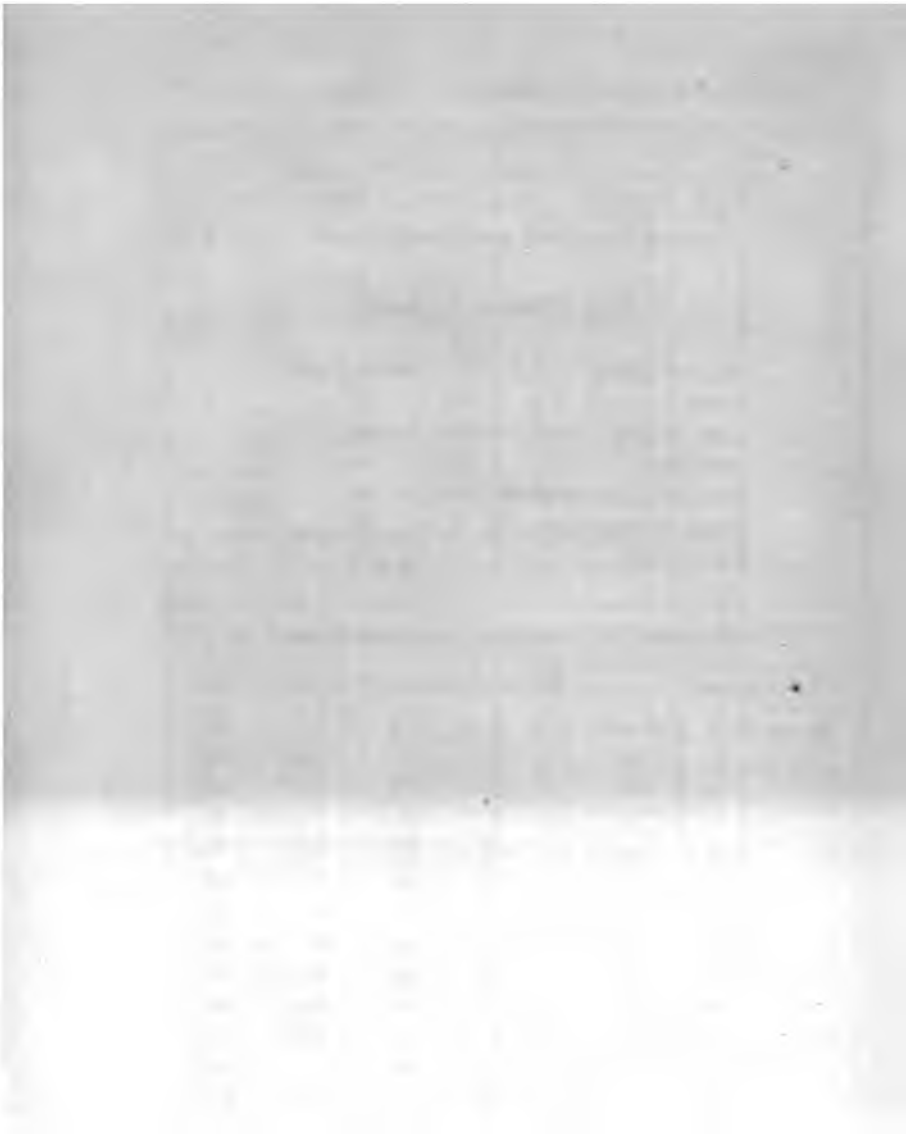
SCALE OF PRICES FOR EARTH WORK.

Getting, filling, and teaming.

	d.	
Sand or gravel . . .	3	per cube yard.
Loam	3½	do.
Clay	4	do.
Stiff clay	4½	do.
Hard stiff clay or chalk	5	do.
Shale, or sand stone . .	8	do.
Lime stone	9	do.

HAULING OR CARRYING, PER CUBE YARD.

Distance.	Horse power. d.	Waggons, oil, &c. d.	Railway. d.	Total. d.
From 0 to ⅛ of mile	1	½	⅛	1⅝
⅛ to ¼ do.	2	1	¼	3¼
¼ to ½ do.	2½	1½	⅜	4⅜
½ to ¾ do.	3	2	1	6
¾ to 1 do.	3½	2½	1⅛	7⅛
1 to 1¼ do.	4¼	3	1¼	8½
1¼ to 1½ do.	5	3½	1⅜	9⅞
1½ to 1¾ do.	5¾	4	2	11¾
1¾ to 2 do.	6½	4½	2⅛	13⅛
2 to 2¼ do.	7¼	5	2¼	14½
2¼ to 2½ do.	8	5½	2⅜	15⅞
2½ to 2¾ do.	8¾	6	3	17¾
2¾ to 3 do.	9½	6½	3⅛	19⅛
3 to 3¼ do.	10¼	7	3¼	20½
3¼ to 3½ do.	11	7½	3⅜	21⅞
3½ to 3¾ do.	11¾	8	4	23¾
3¾ to 4 do.	12½	8½	4⅛	25⅛



The following methods are those generally used in calculating the quantity of earth-work in canals.

MENSURATION OF CANALS.

1*st Method.*

To the bottom breadth add the two heights, that sum multiplied by the sum of heights, and from the product deduct the rectangle of the two heights; the difference multiplied by half the length of the section, will give the true content of the section.

2*nd Method.*

Add the greater depth and bottom breadth together, multiply this sum by the sum of the two heights, and to the product add the square of the lesser height; this sum multiplied by half the length, gives the content of the section.

N. B. The difference between taking a mean or middle dimension in any piece of cutting or irregular solid, and the true method, is, the square of the difference of the two heights multiplied by $\frac{1}{8}$ of the length of the section.

3*rd Method.*

CASE I.

In any even cutting where the cross section is the same.

Rule.—Multiply the perpendicular depth of the section by the ratio of the slopes; to this product add the bottom width of the canal; multiply this sum again by the depth

of the section, and this last product will be the area of the section in the same dimensions the measures are taken in.

N. B. The ratio of the slopes is the length of the horizontal set-off, answering to one in the perpendicular.

CASE II.

When any two sections are of unequal depths, but the ground between them has a regular descent or ascent.

Rule.—Add the perpendicular depths of the two sections together, and square the sum; from this square subtract the product of the two depths multiplied by each other; multiply the remainder by one-third the ratio of the slopes, and reserve the product. Again, multiply the sum of the two depths by half the bottom width of the canal, and to this product add the product before reserved. This sum will be the *mean area* between the two sections: the same as before with regard to the dimensions.

CASE III.

In any piece of cutting where the ground surface at one end is exactly bottom level of the canal.

Rule.—Multiply the square of the perpendicular depth of the section; at the other end, by $\frac{1}{3}$ the ratio of the slopes. To this product add the depth of the section, multiplied by half the bottom width of the canal; the sum will be the mean area as before.

N. B. In any of these cases, the mean area multiplied by the length of the piece gives the solid contents without any benching. The content of the benching may be thus found.

Rule.—From the perpendicular depth of each section subtract the depth of the canal to top bank level; add the two remainders together, and multiply half their sum by the whole width of the benchings on both sides, for a mean area; which, multiplied by the length of the piece, gives the content of the benching.

Embankments are only an inversion of cuttings, and therefore the above rules hold good, with this difference, viz. the top width of the canal, including both its banks, must be substituted here instead of the bottom width of the canal in the above.

MEASURING CANALS.

4th Method.

Problem—To find the area of any transverse section taken at right angles across the line of canal. (Fig. I. Plate 3.)

CASE I.

Is when the depths $d\,d$ of the section, from the ground surface $s\,s$ to the bottom level b of the canal, are everywhere the same.

Theorem—$(rd+b) \times d =$ the area.

Rule.—Multiply the common depth of the section by the ratio of the inside slopes of the canal, and to the product add the canal's bottom width; multiply this sum by the aforesaid depth, and the product will be the area.

Example.—Let us suppose (as in the Ellesmere canal) the bottom width to be 16 feet, and the recedence or ratio of the slopes to be as 1·5 horizontally to 1 perpendicular, and let the depth of the section be 8 feet.

Here,

r	=	1.5
d	=	8.
rd		12.0
b	=	16.0
$rd+b$	=	28.0
d	=	8
		224 the area in feet as required.

CASE II.

Is when the depth $d\,d$ of the section from the ground surface $s\,s$ to the bottom level d of the canal are unequal. (Fig. II. Plate 3.)

Theorem—$r\,d\,d + \frac{d+d}{2} \times b =$ area.

Rule.—To the rectangle of the depths multiplied by the ratio of the slopes, add half the sum of the depths multiplied by the bottom width of the canal, and the sum will be the area.

Example.—Let the least depth be 6 feet—the greatest, 8 feet, and let every thing else remain as before.

Here,

r =	1.5	Again	d =	6
d =	6		d =	8
$r\,d$ =	9.0		2)	14
d =	8			
$r\,d^2$ =	72	$\frac{d+d}{2}$ =		7
	112	b =		16
	184 = area	$\frac{d+d}{2} \times b$ =		112

CASE III.

Is when the surface of the ground (S S) (Fig. III. Plate 3,) intersects the bottom (b) of the canal. In this case (d) is the depth which the surface of the ground is below the bottom level of the canal at the point whence the produced inside slope of the embanked side meets the said surface.

Theorem, $\frac{\frac{1}{2}b - rd}{d + D} \times D^2 =$ the area.

Rule.—Multiply that depth which is under the bottom level, by the ratio of the inside slopes, and subtract the product from half the bottom width of the canal, divide this difference by the sum of the depths, and multiply the quotient by the square of the depth, which is above the bottom level, the product will be the area.

Example.—Let the depth which the bottom level of the canal is below the surface of the ground, be eight feet, and the depth on the other side which the ground's surface is below the bottom level of the canal, be two feet, and let every thing else remain as before.

Here,

$\frac{1}{2}b = 8$ $\quad D = 8$ $\quad \frac{4.5}{10} = .45 = 5 = \frac{\frac{1}{2}b - rd}{d + D}$

$rd = 3.5$ $\quad d = 2$

$\frac{1}{2}b - rd = 4.5$ $\quad d + D = 10$ $\quad .45 \times D^2 = 64 \times 45 = 28.80$ the area.

Problem.—The area of any irregular section being known, to find a mean depth which a regular section must have to be of the same area.

Theorem,—$\sqrt{\frac{a}{r} + \left(\frac{b}{2r}\right)^2} - \frac{b}{2r}$ = the mean depth, where a = the area of the regular section.

Rule.—Divide the bottom width of the canal by twice the ratio of the inside slopes, reserve the quotient. To the area of the section, divided by the said ratios, add the square of the quotient reserved, extract the square root of the sum, and from this root subtract the quotient reserved: the remainder will be the mean depth required.

Example.—Take the area of the figure 2 for case the 2nd.

Here,

1.5) 184.0 (12.26 $= \frac{a}{r} + \left(\frac{b}{2r}\right)^2$

15 + 28.09

34 6.3—5.3 $= \sqrt{\frac{a}{r} + \left(\frac{b}{2r}\right)^2} - \frac{b}{2r}$ the mean required.

30

40

30

100

90

10

3) 16

5.3 $= \frac{b}{2r}$

5.3

159

265

28.09 $= \left(\frac{b}{2r}\right)^2$

ON SETTING OUT CANALS.

Suppose BCDEF to represent the section of a canal, ABCI, and EFGH those of the banks, and LOM the inclination of the land, it is required to set it out so that the part cut or excavated, x C E y, may raise the banks to the height designed.

Continue the outside slopes of the banks till they meet in the point P, and the inside ones till they meet in the point k and v. Join k v, make P $r = 1$; draw q r parallel to k v, and q t u parallel to LOM, the surface of the land. Then, since q x is horizontal, P r to q r is the ratio of the slopes, and q r to r t that of the land.

Now, since the part to be cut must be equal to the banks to be raised, the area x C E y is equal to the areas, A B x L and F y M G; if to these equal quantities be added the common area x B A k l v G F y x, the area L A k l v G M L will be equal to the area C B A k l v G F E C, which is known. The areas of the triangles P q u and P L M are likewise known; therefore, since similar triangles are as the square of their like dimensions, it will be as the area of the triangle P q u : P t^2 :: area P L M to P O^2; and P O taken from P D gives O D, the depth of cutting in the centre of the canal.

If P N be the side of the square = double the area P A B C E F G P, from q x let fall the perpendicular u x, take b e = q x; on P e describe the semicircle P f e, erect the perpendiculars b f, and take P h = b f, join b h, and, parallel thereto, draw N O cutting P D in O, which will be the point required.

For twice the triangle P q u is P t × q x = P t × b e = b f^2 = P h^2 by construction, and since N O is parallel to h t, it will be P h^2 : P t^2 :: P N^2 : P O^2 and P h : P t :: P N : P O.

Let $Pr = 1$

$qr = 1.5$

$br = 0.5$

As $1 : 1.5 :: 05 : nr = \frac{.75}{1} = .75$

$qr = 1.5 - .75 = .75 = qn$.

As $qn : br :: qs : ns$

Or $.75 : .5 :: 3 : \frac{1.5}{.75} = \frac{5}{25} = \frac{1}{5} = s = ns$.

Cor. 1st. Where l coincides with t, the back part of the bank and land are of the same height, and therefore requires no puddle gutter.

2nd. When l and B coincide, the land on the higher side is bank height, and therefore wants no raising.

3rd. Where b and r coincide, the land becomes level.*

Description of an Instrument for determining and setting out the line of Slopes, in Cuttings and Embankments.

As connected with the foregoing subject of cuttings and embankments, I have given in Plate IV. a drawing of an instrument which I made a few years ago, and which has been found of great service in the practical operation of marking out on the ground the line of slopes for cuttings and embankments, particularly on sloping ground, or where side cutting and embanking is necessary.

The instrument is extremely simple and easily used: when adjusted to any slope of ground and cutting, it represents half the transverse section at that particular point.

Thus, suppose the centre line of a railway or turnpike

* The foregoing rules for laying out canals, &c., are extracts from Mr. Telford's Common-place Book.

road to be marked out along the sloping side of the hill, the inclination of which at right angles to the centre line is found to be (say) 5° 0′, that the slopes of the cutting are to be 1 to 1; that the width at the bottom of the cuttings is to be 30 feet, and that the depth of cutting at any particular point is 20 feet; it is required to determine at what distance from the centre line, at that particular point, the line of cutting will terminate on the upper side.

1st. Unclamp the bar C D, by easing the screw *d*; and move it backward or forwards in its groove until 20, the depth of cuttings, coincides with the index point on the side of the groove at *o*, and screw it fast.

2nd. Move the quadrant along the groove in the bar A B, until the fiducial edge E, in a line with the centre of the quadrant, cuts division 15 on the bar A B, which represents half the width at the bottom of the cutting, and clamp it fast.

3rd. Turn the index F G round its centre until the edge F G coincides with the division 1 to 1, which marks the rate of the slopes of the cuttings on the limb of the quadrant L M, and screw it fast.

4th. Turn the index or arm N O P, round its centre O, until the zero point on the vernier Q coincides with the 5th degree, which indicates the sloping surface of the ground, and clamp it fast; then the division 39 on the index N O, intersected by the edge F G of the index or arm F G will show the number of feet, which must be laid off from the centre line, to mark the extremity of the cuttings.

THE END.

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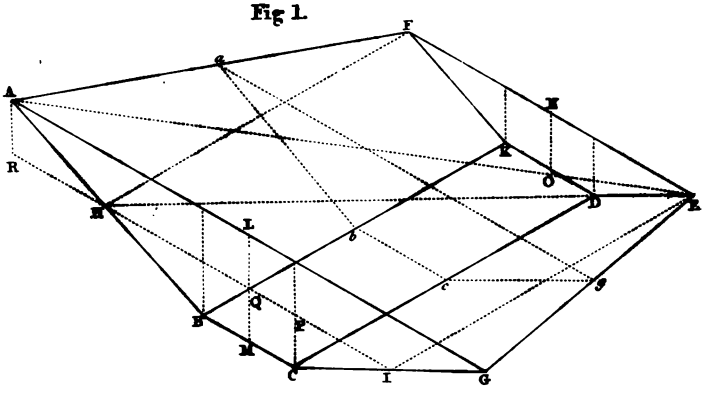
Fig 1.



Longitudinal
Section of a Railway
Fig. 2.

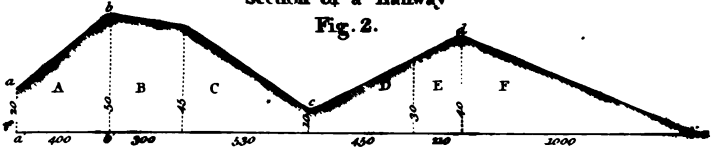
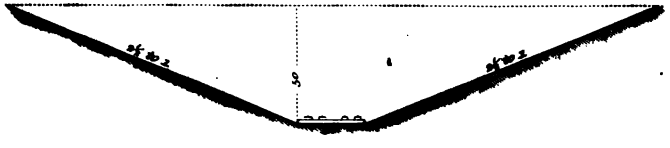


Fig. 3.
Cross Section at b



Section of a Canal
Fig. 4.

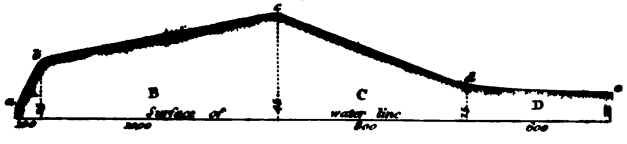
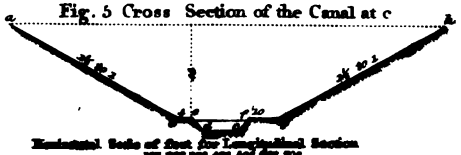


Fig. 5 Cross Section of the Canal at c



Horizontal Scale of feet for Longitudinal Section

J.F.Dundas

B.Farrell Sc.

Fig 6
Longitudinal Section of a Turnpike road

Fig 7
Cross Section at b

Cross Section at b
showing the finished Roadway

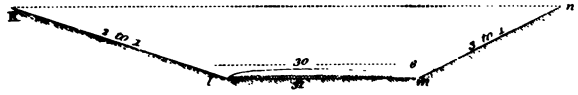


Fig. 8
Longitudinal Section of a Railway

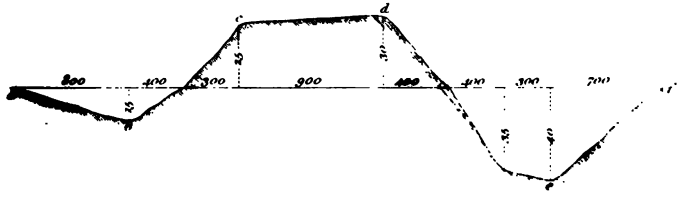


Fig. 9
Cross Section of a Cutting

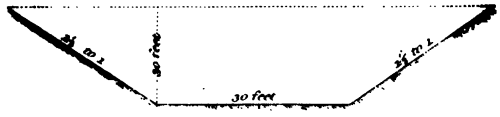
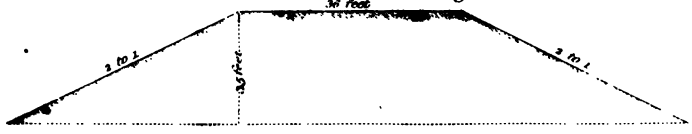


Fig. 10
Cross Section Embanking



J.F Dundas

E Thorn

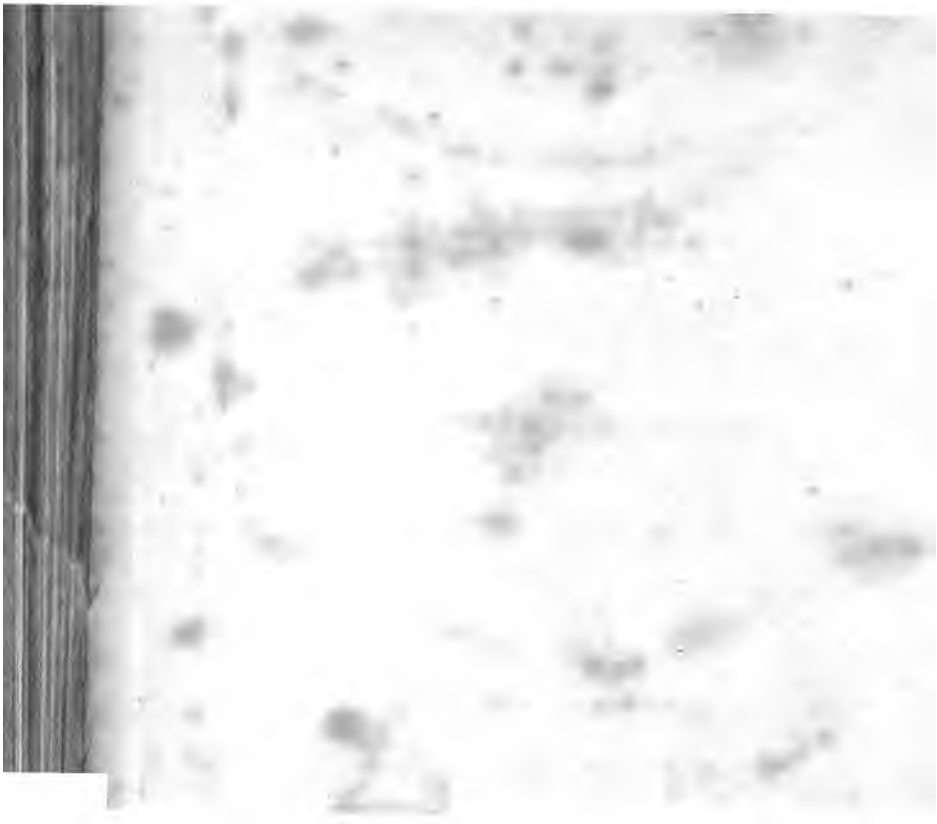


Fig. 1

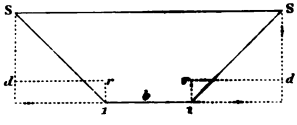


Fig. 2

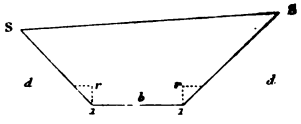


Fig. 3

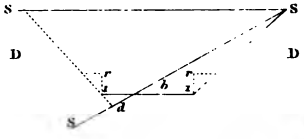


Fig. 5

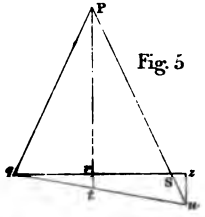
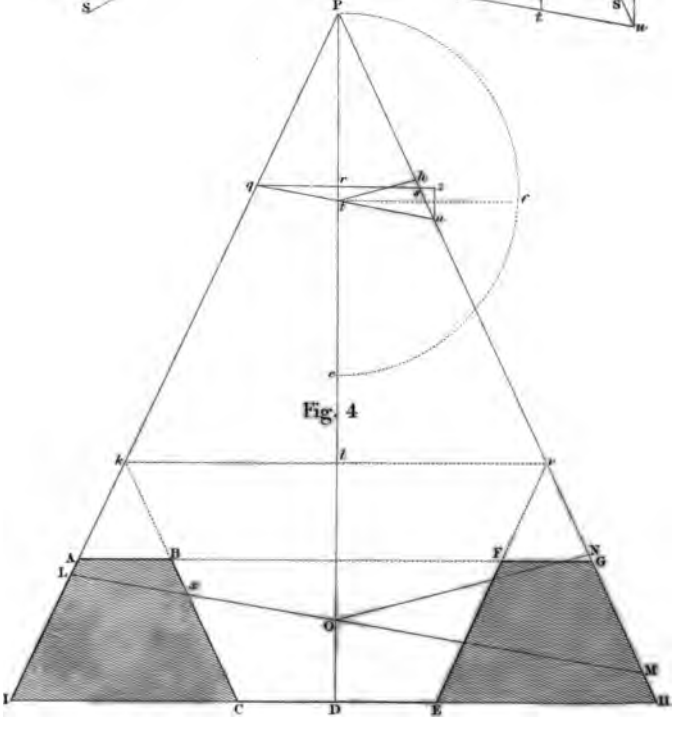
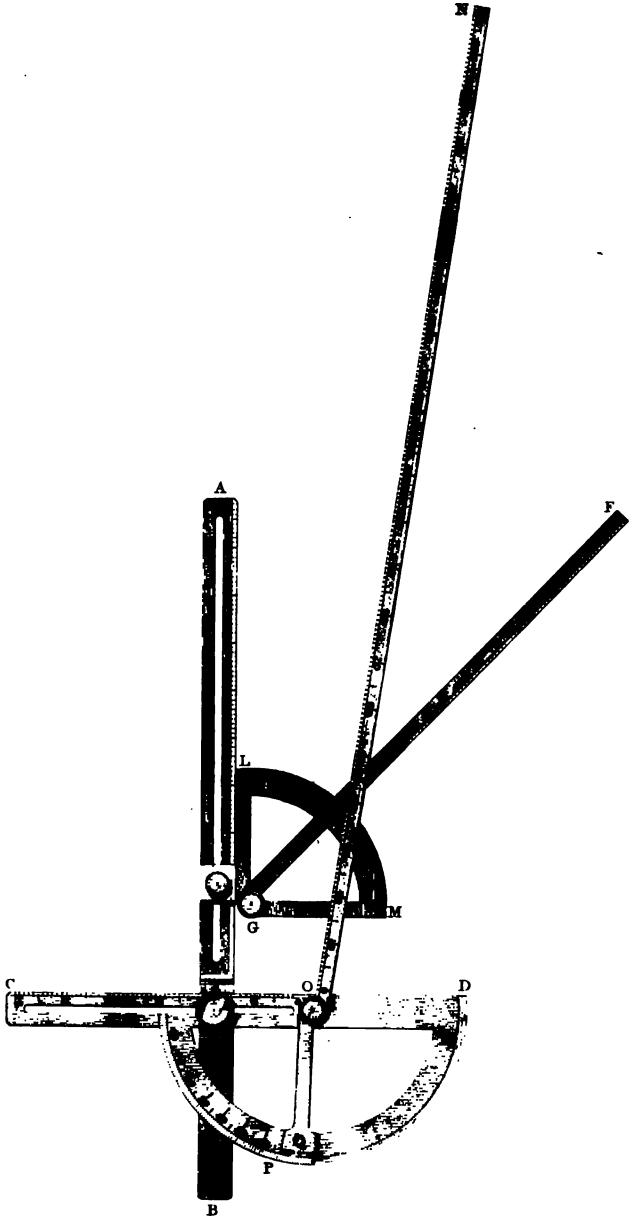


Fig. 4





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